

JOURNAL
OF THE
ASIATIC SOCIETY OF BENGAL.



VOL. LXIX.

PART I. (HISTORY, ANTIQUITIES, &C.).

(NOS. I AND II.—1900.)

EDITED BY THE
HONORARY PHILOLOGICAL SECRETARY.

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"It will flourish, if naturalists, chemists, antiquaries, philologists, and men of science in different parts of *Asia*, will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish, if such communications shall be long intermitted, and it will die away, if they shall entirely cease." SIR WM JONES.  
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CALCUTTA:

PRINTED AT THE BAPTIST MISSION PRESS,

AND PUBLISHED BY THE

ASIATIC SOCIETY, 57, PARK STREET.

1901.

CONTENTS.

OF THE

JOURNAL OF THE ASIATIC SOCIETY OF BENGAL.

VOL. LXIX, PART I.—1900.

No. 1, (issued 15th August, 1900).

	PAGE.
<i>Junguānuh of Farrukhshiyar and Jahāndār Shāh, a Hindī poem by Ārīdhār (Murlīdhar) Brahman, of Prāg.—By WILLIAM IRVINE, late of the Bengal Civil Service</i>	1
<i>A New Copper-plate Inscription of Lakṣmaṇasena.—By BABU AKSHAY KUMAR MAITRA, B.L.</i>	61
<i>The Manahali Copper-plate Inscription of Madanapāladeva.—By BABU N. N. VASU</i>	66
<i>On the identification of Kusinara, Vaisali and other places mentioned by the Chinese pilgrims —By W. HOEY, ESQ., LLT.D., I.C.S. (With an edition of a new Copper-plate Inscription of Jayādityadeva II.—By DR. T. BLOCH)</i>	74

No. 2, (issued 28th February, 1901).

<i>An Epigraphical Note on Palm-leaf, Paper and Birch-bark —By A. F. RUDOLF HOERNLE, PH.D., C.I.E.</i>	93
<i>A collection of Ladakhi Proverbs.—By THE REV. H. FRANCKE, Moravian Missionary, Leh. Communicated by the Philological Secretary</i>	135
<i>A primer of the Asur dukmā, a dialect of the Kolarian language.—By THE REV. FERD. HAHN, German Evangelical Lutheran Mission, Choṭā Nāgpur. Communicated by DR. GRIERSON, C.I.E.</i>	149
<i>An Inscription of the time of Kapilēndra Dēva of Orissa, from Gōpīnāthapura, District Cuttack. (With an Appendix on the last Hindu Kings of Orissa).—By BABU MON MOHAN CHAKRAVARTI, M.A., B.L., M.R.A.S.</i>	173
<i>An Inscription of the time of Nayapāla Dēva, from the Kṛṣṇa-dvārikā Temple at Gayā.—By BABU MON MOHAN CHAKRAVARTI, M.A., B.L., M.R.A.S.</i>	190
<i>Index to Journal, Vol. LXIX, Part I.</i>	196

An Epigraphical Note on Palm-leaf, Paper and Birch-bark.—By

A. F. RUDOLF HOERNLE, PH.D., C.I.E.

[Read May, 1898.]

In his admirable summary of Indian Palæography which forms a part of the Encyclopædia of Indo-Aryan Research, the late Professor Bühler says (I translate from the German) that "it cannot be doubted but that the two large-leaved palms, the *tādātāla* (*Borassus flabelliformis*) and the *tādītālī* (*Corypha umbraculifera*, C. *taliera*) which probably were originally indigenous in South-India, but have now spread into the Panjāb, are those the leaves of which were principally employed" in India as writing-material (see § 37, C.). This statement, which merely repeats a general, oft-repeated opinion, is not quite accurate and therefore apt to mislead. It conveys the impression as if the leaves of those two palms had been used contemporaneously and indifferently throughout India. This is not correct. In preparing the introduction to my edition of the Bower Manuscript, I had occasion to specially enquire into this point. In the result I found (1) that up to a certain point of time, *Corypha umbr.* was the only palm, the leaves of which were used throughout India, and (2) that the use of the leaves of *Borassus fl.* commenced at a comparatively late period, and was, and is still, limited to the South and East of India. In the sequel I will try to show this. There are some minor inaccuracies in the above-quoted statement, which the following explanation will also set right.

The two Indian palms, which alone come into question in this connection, are (1) the (true) Talipat palm, *Corypha umbraculifera*, also *C. Taliera*; and (2) the Palmyra palm or Tarigach, *Borassus flabellifer*.¹

¹ In Bengal the *Corypha umbr.* is called *Tedēl*, while the *Borassus fl.* is called *Tāl*, and the proportion of the two palms is about 1 : 1000. The correct name of the *Borassus*, as Dr. Prain, the Superintendent of the Royal Botanic Gardens in Sibpur, informs me, is not *flabelliformis*, as usually given, but *flabellifer*, this being the name given to the palm by *Linnaeus* who first determined it. There is every

The former grows *wild* in Ceylon and on the Malabar coast, up to about the 13th Lat.; thence it freely grows *cultivated* up the west coast as far as the Concan (16th Lat.), and much less so as far as Bombay (19th Lat.); it also grows (but very uncommonly) *cultivated* up the whole of the East coast into Lower Bengal. It does not grow anywhere in the central part, or the high-lands of Southern India.

The *Borassus fl.* does not grow *wild* anywhere in India, but only *cultivated*, near villages. It grows throughout India, excepting only the Panjāb, Upper Sindh, and the northern-most portions of Rājputānā and of the North-West Provinces. In fact, its northern limit is (about) the 27th or 28th Lat.

The difference between these two palms is that whereas *Corypha umbr.* is *indigenous* to (Southern) India, *Borassus fl.* is an *introduced* tree, having been brought in from Africa, where it grows wild and is called *Deleb*. The above statements sum up the botanical information of the present day, which has been verified afresh for the purpose of the present paper by Dr. Prain, Superintendent of the Royal Botanic Gardens in Sibpur, near Calcutta.² For his assistance, most kindly and readily given, in all matters touching the botany of these palms, I wish here to express my sincere thanks.

The leaves of the two palms can be easily distinguished from one another. Those of the *Corypha umbr.* are thinner and broader than those of the *Borassus fl.*; they also possess clearly marked cross-veins, in the form of ribs, while the *Borassus* leaves rather present a pitted or pock-marked appearance. The width of the *Borassus* leaf never exceeds $1\frac{1}{2}$, and very rarely exceeds $1\frac{1}{2}$ inches. Among all the cases that I have actually measured I have found the latter width only exceeded in three cases. These are No. 40 in Table II which measures $1\frac{5}{8}$ inches, and Nos. 20 and 42 in Table II, which measure $1\frac{9}{16}$ inches; all three being Southern Indian manuscripts. The majority of the *Borassus* manuscripts are something less than $1\frac{1}{2}$ inches wide. A width of less than one inch is very rare; I have only met with it in two Southern Indian manuscripts, *viz.*, Nos. 18 and 37 in Table II, which measure only $\frac{1}{2}$ of an inch.

The usual width of the *Corypha* leaf varies between $1\frac{3}{4}$ and 3 inches. Among the inscribed leaves examined by myself, I have not

reason to believe that *C. Taliera* and *C. umbraculifera* are identical. I understand that Dr. Prain is preparing a monograph on the subject of these palms.

² I should add, however, that, as I understand, more recent enquiries, made by Dr. Prain seem to render it doubtful whether even the *Corypha umbr.* grows *wild* anywhere in India or Ceylon. A very puzzling question then arises as to the real original home of that palm.

met with any wider than $2\frac{1}{2}$ inches; though a few manuscripts which I have not seen are said to exist of the width of 3 inches (see Table III, No. 83). Manuscripts under $1\frac{3}{4}$ inches wide are uncommon: instances are Nos. 15, 48, 57, 64 and 67 in Table I, and Nos. 4 and 8 in Table II. A width of less than $1\frac{1}{2}$ inches is very exceptional. I have only found three cases, among all the manuscripts which I have measured; viz., No. 12 in Table II which is $1\frac{3}{8}$ of an inch wide, and No. 55 in Table I and No. 5 in Table II, which are as low as $1\frac{1}{4}$ inches. The width, therefore, is an almost absolute test; any leaf, measuring $1\frac{3}{4}$ and upwards is certain to be *Corypha umbr.*, while any leaf measuring $1\frac{1}{4}$ or below, is almost certain to be *Borassus fl.* With the width of about $1\frac{1}{2}$ inches, there may occasionally be a doubt, but this will be removed by the application of the two additional tests of thickness and venation. In any case where the actual leaf can be examined, the three tests in combination are absolutely decisive. In almost all cases where the leaf itself can not be examined, its width, if recorded, will be found decisive. Thus in the case of Add. 1706 of the Cambridge MSS., probably of A. D. 1261 (Bendall, p. 199 and Table III, No. 57), the width of which is stated to be $1\frac{1}{2}$ inches, I judged it to be a *Corypha* manuscript; and this was kindly verified for me by Professor Cowell by means of *Corypha* and *Borassus* specimens which I transmitted to him.

I have been speaking hitherto of the leaf in its prepared state as writing material. With regard to the natural leaf, which I had an opportunity of examining and measuring, with the kind assistance of Dr. Prain, in the Sibpur Botanic Gardens, the case stands as follows:—Both the *Corypha* and the *Borassus* palms, as is well-known, have plicate leaves folding like a fan, consisting of a number of segments. Through the middle of each segment, from end to end, runs a hard rib. The flaps on both sides of the rib are tough and flexible; and these yield the material which is prepared for writing purposes. They taper off from their widest point towards both ends; accordingly suitable strips are cut out from the middle, of such various lengths as the size of the natural half-segment will admit. These strips are prepared for writing, by boiling in water or milk; and finally, when wanted for writing a book, the required number of strips are cut down to a uniform size. Uniformity, however, was always more carefully attended to in point of length than in point of breadth. In manuscripts, of an older date especially, leaves of a much smaller breadth are occasionally mixed with others (forming the majority) which are much wider. Thus in No. 35 of Table I and Nos. 1, 4, 9, 10, 11 of Table II the occurrence of narrower leaves is indicated in brackets: they are occasionally found as narrow as $1\frac{1}{8}$ inches.

The half-segment (that is a segment divided longitudinally along the central rib) of a *Borassus* leaf, at the point of its greatest width, may measure 2 inches, but it usually measures less. It tapers off very rapidly towards both ends; hence it is not possible to cut out from it a piece of practically uniform width of more than $1\frac{1}{2}$ inches. A strip of about $16 \times 1\frac{1}{2}$ inches is the largest that can be obtained. If a greater length is desired, consistent with uniform width, the latter will be smaller. From the usual size of the natural segment, however, only prepared strips of a smaller width than $1\frac{1}{2}$ inches can be obtained. Occasionally the point of uniform width is neglected, and thus leaves are obtained measuring in length up to 20 inches, with a maximum width of $1\frac{1}{2}$ inches. Examples are Nos. 77 and 87 in Table I, the width of which grows (as noted in the Table) from 1 or $1\frac{1}{4}$ inches at the ends to $1\frac{1}{2}$ inches in the middle of the leaf. As a rule, however, a prepared leaf, measuring a length of more than 16 inches, with a width of $1\frac{1}{2}$ inches, is more likely to be a *Corypha* leaf.

The half-segment of a *Corypha* leaf, at its widest point, may measure three inches. I measured one leaf of this great size in the Sibpur Royal Botanic Gardens; but it is not improbable that leaves of this size may occur more commonly in Ceylon and Malabar, where the tree grows wild. A *Corypha* segment is much longer than a *Borassus* segment, and it tapers off far more gently, than the latter, from its widest point to its ends. Hence it is possible to cut much longer and wider strips from a *Corypha* segment. The largest manuscripts that I have measured are Nos. 30 and 34 in Table I, which measure $32\frac{5}{8} \times 2\frac{1}{2}$ and $33 \times 2\frac{1}{4}$ inches respectively. The length, however, may extend to 3 feet and more, and the width to 3 inches. The largest manuscript of which I know is No. 2068 in the Notices of Sanskrit MSS. It is said to measure 40×2 inches (see Table III, No. 138, and footnote 11). The next largest are Nos. 262 and 289 (in Professor Peterson's Report for 1884-86, pp. 109 and 142; see also Table III, No. 72). They are said to measure $37\frac{1}{2} \times 2\frac{1}{2}$ and $37 \times 2\frac{3}{4}$ inches respectively. From the particular half segment which I measured to be 3 inches wide³ strips measuring about $2\frac{1}{2} \times 22$, or $2\frac{1}{4} \times 25$, or 2×30 inches might have been cut. On the other hand, I have also measured narrow specimens of natural *Corypha* segments which would only yield strips measuring $16 \times 1\frac{1}{2}$ inches or even less. Examples of manuscripts of this kind are Nos. 48, 57, 67 in Table I and Nos. 4, 5, 8, 12 in Table II. Of course when strips of the great width of 3 inches were desired, one would usually

³ The complete natural segment, of course, measured 6 inches across. Similarly the widest complete *Borassus* segment measures 4 inches across the widest point.

have had to be contented with but a short length. The only two manuscripts of this great width that I know are No. 187 in Professor Peterson's Third Report for 1884-86 (p. 8), and No. 58 in his Fifth Report for 1892-95 (p. 98, also Table III, No. 83), both of which are 3 inches broad. The former of these is only $14\frac{1}{2}$ inches long. The latter (dated 1369 A.D.) is said to be 32 inches long, but I suspect that this is an error: its measures probably are 12×3 or 32×2 .⁴ *Corypha* manuscripts of very great length, however, rarely possess an uniform width. Their leaves are cut from a whole half-segment; their maximum width is in the middle and it decreases towards both ends. A good example is No. 30 in Table I, some of the leaves of which slope from $2\frac{1}{2}$ to $1\frac{1}{2}$ inches. On the other hand, good examples of great length combined with practically uniform width are Nos. 34 and 36 in Table I, the breadth of which varies by no more than $\frac{1}{4}$ inch or even less. Sometimes the half-segments of *Corypha* leaves were cut, across their breadth, into halves, and the strips for writing were cut from these halves. In this case, of course, the maximum width is at one end of the inscribed leaf, and gradually decreases to the other end. Examples of this kind are Nos. 2, 28, 32 in Table I, the leaves of which decrease from 2 to $1\frac{3}{4}$, $1\frac{3}{4}$ to $1\frac{1}{4}$ and $2\frac{1}{4}$ to $1\frac{3}{4}$ inches respectively.

I may add that there is a kind of *Corypha* palm, the *Corypha elata*, which grows, probably *cultivated*, in Bengal and Bihār. But its leaves are not suitable for the purpose of writing books, and have never been so used. Its complete natural segments are much too narrow; they measure only about $1\frac{1}{2}$ inches, and allow only strips of $\frac{3}{4}$ inch or less to be cut from them.

Having premised this much, I may now proceed to state that I have examined the actual or facsimile leaf of 130 manuscripts. They are

⁴ Another clear instance of an error is in the record of No. 86 (Fifth Report, p. 136). This MS., dated 1241 A.D., is said to be of palm-leaf and to measure 16×4 inches. This width of 4 inches, for a palm-leaf MS., is an impossibility; it would indicate a natural segment of the width of at least 8 inches!! Prof. Bhandarkar, whom I consulted, writes to me: "There must be some mistake about the breadth of the leaves of No. 86. I have seen the MSS. in the Deccan College and a good many at Pātān, perhaps the same as those catalogued by Dr. Peterson, but I do not remember having seen any loaves of that breadth. Dr. Peterson's cataloguing work was done by clerks and agents, and it is not unlikely that it was not done with the scrupulous care of the scientific scholar." The measures would suit a paper MS.; and that possibly is the solution of the error. There is a similar error in Bendall's Catalogue of the Cambridge MSS. Here Add. 1633 is described as a palm-leaf MS. of the extraordinary breadth of 5 inches. It is, however, a Paper MS., as I am informed by Professor Cowell, who, at my request, very kindly inspected the manuscript.

shown in the subjoined Tables I and II, with 87 and 43 Nos. respectively. Table I contains manuscripts, of which the date is known, while Table II contains manuscripts of conjectural dates. The lists are not selected ones in any other sense than that I have included in it none but such manuscripts as I have actually seen and examined myself, and thus determined the palm to which their leaves belong. Those manuscripts (27 out of 130) of which I have seen leaves only in photographic facsimile are marked with an asterisk. The manuscripts marked "Kielhorn" and "Bhandarkar" are preserved in the Deccan College in Poona. The opportunity of inspecting them I owe to the kindness of Mr. Giles, Director of Public Instruction in Bombay, and Professor Abaji Kathavate of the Deccan College, who transmitted specimen leaves to me. The numbers refer to the Reports on the Search of Sanskrit MSS. in the Bombay Presidency for 1880-81 and 1887-91. The Tanjore manuscripts, which are referred to by their numbers in Burnell's Classified Catalogue, were transmitted to me by Mr. Geo. T. Oliver, the Receiver and Manager of the Tanjore Palace Estate; so were those, marked "in private hands," by Maulvi Muhammad Abdullah, an officer of the Darbhanga Rāj. To both these gentlemen I wish here to express my sincere thanks. Nearly the whole of the remainder of the list are manuscripts preserved in Calcutta in the collections of the Asiatic Society of Bengal and the Government of India. They are referred to as "Mitra," "Ind. Govt." and "Notices." These, of course, I had no difficulty in inspecting. My friends, Mahā-mahōpadhyāya Pandit Hara Prasad Shastri, and Muni Hans Vijay-ji, the head of one of the Jain Ćākhās, were also kind enough to let me see a few palm-leaf manuscripts in their possession. I may add that the measurements of all the manuscripts in the two lists have been made or verified by myself.

TABLE I.⁵

No.	A. D.	Date.	Reference.	Loc.	Mat.	Measure.
1	[450]		Fragments, J. A. S. B.	W. Ind.	Cor.	9×2
2*	[520]		Horiuzi.	W. Ind.	Cor.	11×2 to $1\frac{1}{2}$
3*	[550]		Add. 1702, Bendall.	W. Ind.	Cor.	12×2
4*	859	Harṣa 252.	Add. 1049, Bendall.	W. Ind.	Cor.	16×2
5*	1008	Nep. 128.	Add. 866, Bendall.	Nep.	Cor.	21×2
6	1014	Nep. 134.	No. 3828, Ind. Govt.	Nep.	Cor.	$12\frac{1}{2} \times 2\frac{1}{2}$
7*	1015	Nep. 135.	Pal. Soc., No. XXI.	Nep.	Cor.	$21\frac{1}{2} \times 2\frac{1}{2}$
	1020	5 Mahipāla.	Add. 1464, Bendall.	Bih.	Cor.	$21 \times 2\frac{1}{2}$
	1026	Nep. 146.	See No. 6 above.		Cor.	
9	1071	Nep. 191.	A 15, Mitra.	Nep.	Cor.	$22\frac{1}{2} \times 2\frac{1}{2}$
10	1078	Nep. 198.	No. 3830, Ind. Govt.	Nep.	Cor.	$18 \times 1\frac{1}{2}$
11*	1084	Nep. 204.	Pal. Soc., No. XVII.	Nep.	Cor.	12×2
12	1089	Sam. 1145.	No. 35, Kielhorn.	W. Ind.	Cor.	$25\frac{1}{2} \times 2\frac{1}{2}$
13	1090	Sam. 1146.	No. 36, do.	W. Ind.	Cor.	$25\frac{1}{2} \times 2\frac{1}{2}$

⁵ About No. 6 see *Journal, As. Soc. Beng.*, Vol. LXII (1893), p. 252. The MS. has two dates; viz., N. S. 134 on the outside of the first written leaf, and N. S. 146 in the colophon, on the last leaf. These are probably the dates of beginning and finishing the copy. There are similarly two dates on No. 50; viz., Lakṣ. 374 and Çak 1423. As to No. 72 I may note that under No. 2126 of the "Notices" two manuscripts are described. The Government manuscript is a Corypha MS., and is entered here in Table I. The other manuscript, which I have not seen, is entered in Table III, No. 128; and to judge from its measurements, it is a Borassus MS. The date of the Government manuscript, however, is *çakāddāḥ* | 16 | with a lacuna for the units and tens, which may mean 1600 as Dr. Mitra assumed; but it may be also a later date. The measurements of Nos. 26 and 41 have been kindly verified for me by the Honorary Librarian of the Royal Asiatic Society. Some leaves of Nos. 39 and 42 are much narrower, viz., $32 \times 1\frac{1}{2}$ (1) and $15 \times 1\frac{1}{2}$ ($1\frac{1}{4}$) respectively. The equation of the dates of the Lakṣmaṇiya Era has been made with 1105, the present year 1898 being = 793 L. E., and the 1st year of that era running from the 15 Jan., 1106, to the 15th January, 1107. No. 65 is dated Çaka 1555 and San 1041. The latter date refers to the Faṣlī Era of Bengal, and is = 1633 A.D.; see Cunningham's *Book of Indian Eras*, p. 82. "Pal. Soc." refers to the Publications of the London Palaeographical Society. In the case of a few manuscripts, such as No. 17, 55, etc., the length is not given by me, because at the time I examined them, I forgot to take a note of it.

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
14 ⁶	1116	Sam. 1172.	Muni Hans Vijay-ji.	W. Ind.	Cor.	29 × 2½
15	1120	Sam. 1176.	No. 53, Kielhorn.	W. Ind.	Cor.	13 × 1½
16	1120	15 Rāma-pāla.	In my possession.	Bih.	Cor.	22 × 2¼
17	1130	Nep. 250.	With H. P. Shāstri.	Nep.	Cor.	2
18*	1132	Sam. 1189.	With Prof. Bühler.	N. Ind.	Cor.	2
19	113[8]	Sam. 119*.	No. 58, Kielhorn.	W. Ind.	Cor.	28 × 2½
20*	1165	Nep. 285.	Add. 1693, Bendall.	Nep.	Cor.	16 × 2½
21*	1165	4 Gōvinda-pāla.	No. 1, R. As. Soc.	Bih.	Cor.	22½ × 2½
22*	1166	Nep. 286.	No. 2, R. As. Soc.	Nep.	Cor.	22½ × 2
23*	1167	Nep. 287.	Add. 1686, Bendall.	Nep.	Cor.	11 × 2
24*	1179	Nep. 299.	Add. 1691, Bendall.	Nep.	Cor.	12 × 2
25	1185	24 Govinda-pāla.	No. 3822, Ind. Govt.	Bih.	Cor.	11½ × 2
26*	1198	Nep. 318.	No. 69, R. As. Soc.	Nep.	Cor.	12½ × 2
27*	1199	38 Gōvinda-pāla.	Add. 1699, Bendall.	Bih.	Cor.	11½ × 2½
28	1208	Sam. 1264.	No. 8, Kielhorn.	W. Ind.	Cor.	13½ × 1½ to 1½
29*	1229	Çak. 1151.	Pal. Soc., No. I.		Cor.	17½ × 2½
30	1238	Sam. 1294.	No. 38, Kielhorn.	W. Ind.	Cor.	32½ × 2½ to 1½
31	1276	Sam. 1332.	No. 3, do.	W. Ind.	Cor.	14½ × 2½
32	1284	Sam. 1340.	No. 60, do.	W. Ind.	Cor.	15 × 2¼ to 1½
33*	1286	Nep. 406.	Pal. Soc., No. XXXII	Nep.	Cor.	13 × 2½
34*	1291	Sam. 1348.	Pal. Soc., No. LVIII.		Cor.	33 × 2½
35	1297	Kal. 4398.	No. 34, Kielhorn.	W. Ind.	Cor.	14½ × 1½ (1½)
36	1303	Sam. 1359.	No. 37, do.	W. Ind.	Cor.	30½ × 2½

⁶ This is a manuscript written by Aṣṭka Candra and Dhanēçvara Sādhu, and corrected by Vardhamāna Sūri (apparently the author), Nēmicandra Munīçvara, and Pārçvacandra Upādhyāya. The name of the work is Dharma Karaṇḍaka Sūtra Tīkā, and its author is Vardhamāna Sūri, a pupil of Abhayadēva Sūri. Its date is given in the following śloka: *vikramatō varṣāṇām çatēṣu = ēkūdaçaṣu = atitēṣu | dvā-saptatyā varṣair = adhikēṣu kṛtā vikṛtir = ēṣā |*

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
37	1319	Lakṣ. 214.	In private hands.	Bih.	Cor.	$15\frac{1}{2} \times 1\frac{1}{2}$
38	1331	Nep. 451.	No. 3824, Ind. Govt.	Nep.	Cor.	12×2
39	1340	Sam. 1396.	Muni Hans Vijay-ji.	W. Ind.	Cor.	$32 \times 2\frac{1}{16}(1\frac{1}{2})$
40	1356	Nep. 476.	No. 3823, Ind. Govt.	Nep.	Cor.	$11\frac{1}{2} \times 2$
41*	1364	Nep. 484.	No. 74, R. As. Soc.	Nep.	Cor.	$12\frac{1}{2} \times 1\frac{1}{2}$
42	1368	Sam. 1424.	Muni Hans Vijay-ji.	W. Ind.	Cor.	$15 \times 2\frac{1}{2}(2)$
43*	1372	Nep. 492.	Pal. Soc., No. LVII.	Nep.	Cor.	$20\frac{1}{2} \times 2\frac{1}{2}$
44*	1385	Nep. 505.	Add. 1395, Bendall.	Nep.	Cor.	$13\frac{1}{2} \times 2$
45	1386	Sam. 1442.	No. 1980, Notices.	Beng.	Cor.	11×2
46	1395	Nep. 515.	Ind. Gov.	Nep.	Cor.	$13\frac{1}{4} \times 1\frac{1}{4}$
47*	1446	Sam. 1503.	Pal. Soc., No. XXXIII.	Bih.	Cor.	$13\frac{1}{2} \times 2\frac{1}{2}$
48	1450	Lakṣ. 345.	In private hands.	Bih.	Cor.	$13 \times 1\frac{1}{2}$
49	1467	Lakṣ. 362.	No. 3821, Ind. Govt.	Bih.	Cor.	13×2
50	1479	Lakṣ. 374.	No. 4026, Ind. Govt.	Bih.	Cor.	$11\frac{1}{2} \times 2$
	1507	Çak. 1423.	See No. 50 above, and footnote 5.			
51	1504	Lakṣ. 399.	No. 1979, Notices.	Bih.	Cor.	$14\frac{1}{2} \times 2\frac{1}{2}$
52	1513	Lakṣ. 408.	In private hands.	Bih.	Cor.	$13\frac{1}{4} \times 1\frac{1}{2}$
53	1514	Çak. 1436.	No. 1273 Notices.	Beng.	Cor.	$14\frac{1}{2} \times 1\frac{1}{2}$
54	1531	Çak. 1453.	No. 1165 do.	Beng.	Cor.	$13\frac{1}{2} \times 2$
55	1553	Çak. 1475.	H. Prasāda Shāstri.	Beng.	Cor.	$1\frac{1}{2}$
56*	1557	Lakṣ. 452.	Pal. Soc., No. LXXXII.	Bih.	Cor.	$13\frac{1}{2} \times 2$
57	1572	Çak. 1494.	No. 1274, Notices.	Beng.	Cor.	$13\frac{1}{2} \times 1\frac{1}{2}$
58	1575	Lakṣ. 470.	In private hands.	Bih.	Cor.	$13\frac{1}{2} \times 2\frac{1}{2}$
59*	1583		Add. 1556, Bendall.		Cor.	$2\frac{1}{2}$
60	1587	Çak. 1509.	No. 1976, Notices.	Beng.	{ Cor. } { Bor. }	$12 \times \left\{ \begin{array}{l} 1\frac{1}{2} \\ 1\frac{1}{2} \end{array} \right\}$
61	1594	Çak. 1516.	No. 1975 do.	Beng.	Bor.	$12 \times 1\frac{1}{2}$
62	1608	Lakṣ. 503.	In private hands.	Bih.	Cor.	$13\frac{1}{2} \times 1\frac{1}{2}$
63	1609	Lakṣ. 504.	do.	Bih.	Cor.	$13\frac{1}{2} \times 2$

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
64	1616	Lakṣ. 511.	In private hands.	Bih.	Cor.	$14\frac{1}{2} \times 1\frac{1}{2}$
65	1633	Çak. 1555.	do.	Bih.	Cor.	$12 \times 1\frac{1}{2}$
66	1647	Çak. 1569.	do.	Bih.	Cor.	$11\frac{1}{2} \times 2$
67	1661	Lakṣ. 556.	do.	Bih.	Cor.	$12\frac{1}{2} \times 1\frac{1}{2}$
68	1668	Çak. 1590.	do.	Bih.	Cor.	$7\frac{1}{2} \times 1\frac{1}{2}$
69	1669	Çak. 1591	do.	Bih.	Cor.	$7 \times 1\frac{1}{2}$
	1660	Lakṣ. 555				
70	1675	Çak. 1597.	H. Prasāda Shāstri.	Beng.	Bor.	$1\frac{1}{2}$
71	1677	Çak. 1599.	do. do.	Beng.	Bor.	$1\frac{1}{2}$
72	1678	Çak. 1600.	No. 2126, Notices.	Beng.	Cor.	$15\frac{1}{2} \times 2$
73	1680	Çak. 1602.	In private hands.	Bih.	Cor.	$14 \times 1\frac{1}{2}$
74	1683	$\frac{2}{2}\frac{2}{2}$ Mukunda.	Ind. Govt.	Oris.	Bor.	$? \times 1\frac{1}{2}$
75	1683	$\frac{2}{2}\frac{2}{2}$ Mukunda.	do.	Oris.	Bor.	$15 \times 1\frac{1}{2}$
76	1687	Çak. 1609.	No. 1551, Notices.	Beng.	Bor.	$11 \times 1\frac{1}{2}$
77	1688	Çak. 1610.	No. 1550 do.	Beng.	Bor.	$20 \times 1\frac{1}{2}$ to 1
78	1689	Çak. 1611.	No. 1580 do.	Beng.	Bor.	$14\frac{1}{2} \times 1\frac{1}{2}$
79	1690	$\frac{4}{3}\frac{1}{3}$ Mukunda.	No. 2837, do.	Oris.	Bor.	$16 \times 1\frac{1}{2}$
80	1694	Çak. 1616.	No. 10040, Tanjore.	S. Ind.	Bor.	$10\frac{1}{2} \times 1\frac{1}{2}$
81	1708	17 Divya-Sirṃha.	Ind. Govt.	Oris.	Bor.	$15\frac{1}{2} \times 1\frac{1}{2}$
82	1721	Çak. 1643.	H. Prasāda Shāstri.	Beng.	Cor.	$2\frac{1}{2}$
83*	1724		Burnell. S. Ind. Pal.	S. Ind.	Cor.	$15\frac{1}{2} \times 2\frac{1}{2}$
84	1739	Çak. 1661.	No. 1845, Notices.	Bih.	Cor.	$15\frac{1}{2} \times 2$
85	1752	10 Kṣāri-Dēva.	Ind. Govt.	Oris.	Bor.	$14\frac{1}{2} \times 1\frac{1}{2}$
86	1766	24 do.	do.	Oris.	Bor.	$15 \times 1\frac{1}{2}$
87	1815	Çak. 1737.	No. 1607, Notices.	Beng.	Bor.	$14\frac{1}{2} \times 1\frac{1}{2}$ to 1

All manuscripts in the foregoing Table (with the exception of Nos. 1-3) bear an actual date. The following Table II includes manuscripts the approximate date of which can be fixed with some degree of certainty. This has been done by myself, mainly on palæographic grounds, in all cases except those marked with the letter B. The date

of the latter is that given to them by Dr. Burnell in his Classified Catalogue of Tanjore Manuscripts.

TABLE II.

No.	A. D.	Reference.	Loc.	Mat.	Measure.
1	1150	No. 44, Kielhorn.	W. Ind.	Cor.	$14\frac{1}{2} \times 1\frac{1}{2}$ (1 $\frac{1}{2}$)
2	1150	No. 46 do.	W. Ind.	Cor.	$29\frac{1}{2} \times 1\frac{1}{2}$
3	1200	No. 33 do.	W. Ind.	Cor.	$15 \times 1\frac{1}{2}$
4	1200	No. 68 do.	W. Ind.	Cor.	$12\frac{1}{2} \times 1\frac{1}{2}$ (1 $\frac{1}{2}$)
5	1225	No. 40 do.	W. Ind.	Cor.	$11 \times 1\frac{1}{2}$
6	1250	No. 32 do.	W. Ind.	Cor.	$12\frac{1}{2} \times 1\frac{1}{8}$
7	1250	No. 69 do.	W. Ind.	Cor.	$14\frac{1}{2} \times 2$
8	1300	No. 30 do.	W. Ind.	Cor.	$12\frac{1}{2} \times 1\frac{1}{2}$
9	1300	No. 63 do.	W. Ind.	Cor.	$14\frac{1}{2} \times 1\frac{1}{2}$ (1 $\frac{1}{2}$)
10	1325	No. 20 do.	W. Ind.	Cor.	$12\frac{1}{2} \times 1\frac{1}{2}$ (1 $\frac{1}{2}$)
11	1375	No. 67 do.	W. Ind.	Cor.	14×2 (1 $\frac{1}{2}$)
12	1525	No. 1062 Bhandarkar.	S. Ind.	Cor.	$14 \times 1\frac{1}{2}$
13*	1550	Pal. Soc., No. LXX.	S. Ind.	Bor.	$14 \times 1\frac{1}{2}$ (B)
14 ⁷	1550	No. 1056, Bhandarkar.	S. Ind.	Cor.	19×2
15*	1550	No. 11894, Tanjore.	S. Ind.	Bor.	$18\frac{1}{2} \times 1\frac{1}{2}$ (B)
16	1580	No. 10093 do.	S. Ind.	Bor.	$16 \times 1\frac{5}{16}$ (B)
17	1600	No. 1061, Bhandarkar.	S. Ind.	Cor.	$17\frac{1}{2} \times 2$
18	1600	No. 9075, Tanjore.	S. Ind.	Bor.	$17 \times 1\frac{5}{16}$ (B)
19	1600	No. 10511 do.	S. Ind.	Bor.	$11\frac{1}{2} \times 1\frac{5}{16}$ (B)
20	1600	No. 9997 do.	S. Ind.	Bor.	$18\frac{1}{2} \times 1\frac{5}{16}$ (B)
21	1620	No. 9140 do.	S. Ind.	Bor.	18×1 (B)
22	1620	No. 10288 do.	S. Ind.	Bor.	$18\frac{1}{2} \times 1\frac{1}{2}$ (B)
23	1625	No. 10869 do.	S. Ind.	Bor.	15×1 (B)

⁷ The inner leaves of this manuscript are old. The outer ones, at the beginning and end, are larger ($20\frac{1}{2} \times 2\frac{1}{2}$) and of a much more modern date (about 1700 A.D.). I examined the leaves numbered 1,105 and 260.

No.	A.D.	Reference.	Loc.	Mat.	Measure.
24	1650	No. 1060, Bhandarkar.	S. Ind.	Cor.	$19\frac{1}{2} \times 2\frac{1}{2}$
25	1650	No. 9710, Tanjore.	S. Ind.	Cor.	$13\frac{7}{8} \times 2$
26	1650	No. 9908 do.	S. Ind.	Cor.	$18\frac{7}{8} \times 2\frac{1}{2}$
27	1650	No. 9066 do.	S. Ind.	Bor.	$16 \times 1\frac{3}{8}$ (B)
28	1650	No. 9185 do.	S. Ind.	Bor.	$15 \times 1\frac{1}{2}$ (B)
29	1650	No. 9760 do.	S. Ind.	Bor.	$15\frac{1}{2} \times 1\frac{1}{8}$ (B)
30	1650	No. 9076 do.	S. Ind.	Bor.	$15\frac{3}{4} \times 1\frac{3}{8}$ (B)
31*	1670	No. 9531 do.	S. Ind.	Bor.	$19\frac{3}{4} \times 1\frac{9}{16}$ (B)
32	1700	No. 989, Bhandarkar.	S. Ind.	Bor.	$13\frac{1}{2} \times 1\frac{1}{2}$
33	1700	No. 9169, Tanjore.	S. Ind.	Cor.	$16 \times 2\frac{1}{2}$ (B)
34	1700	No. 9605 do	S. Ind.	Cor.	$12 \times 1\frac{1}{16}$
35	1700	No. 9870 do.	S. Ind.	Cor.	14×2
36	1700	No. 9960 do.	S. Ind.	Bor.	$15\frac{3}{8} \times 1\frac{5}{16}$ (B)
37	1700	No. 9935 do.	S. Ind.	Bor.	$16\frac{1}{8} \times 1\frac{5}{8}$ (B)
38	1700	No. 10910 do.	S. Ind.	Bor.	$14\frac{3}{4} \times 1\frac{9}{16}$ (B)
39	1720	No. 8974 do.	S. Ind.	Bor.	$18\frac{1}{2} \times 1$ (B)
40	1720	No. 10868 do.	S. Ind.	Bor.	$17\frac{1}{8} \times 1\frac{1}{2}$ to $1\frac{1}{16}$ (B)
41	1750	No. 9098 do.	S. Ind.	Bor.	$14\frac{3}{8} \times 1\frac{3}{16}$ (B)
42	1750	No. 9739 do.	S. Ind.	Bor.	$12\frac{3}{4} \times 1\frac{9}{16}$ (B)
43	1750	No. 10786 do.	S. Ind.	Bor.	$16\frac{3}{8} \times 1\frac{3}{8}$ (B)

In the following remarks my arguments will be based entirely on the information furnished by Table I. The information of Table II will be used only as subsidiary and corroborative evidence.

Further, for the present, my remarks will be limited entirely to the conditions obtaining in Northern India, *i.e.*, broadly speaking North of the 20th degree of latitude. The case of Southern India will be considered later on.

The first point, very clearly brought out by Table I, is the exclusive use of *Corypha* leaves throughout Northern India, up to the latter part of the 17th century A.D. A very marked change begins with 1675 A.D. Before that date (with one exception, No. 60, which I shall

presently refer to) all dated manuscripts are uniformly written on Corypha leaves. From 1675 A.D. the use of the Borassus leaf almost entirely supersedes that of the Corypha leaf. Commencing with that year there are 18 manuscripts examined by me. Two of these are South-Indian which must be excluded. Of the remaining 16 manuscripts 12 are written on Borassus leaves, and only 4 on Corypha leaves; that is to say, 75 per cent. are Borassus manuscripts.

In order to appreciate the very effective character of the evidence of Table I, let it be noted that, between the years 1000 and 1770, there is a total of 77 decades, of which not less than 51 are represented in the Table by one or more manuscripts. The 14th and 17th centuries are the best represented, every decade appearing in the Table, except those beginning with 1320, 1620 and 1650. The 15th century is the worst represented, as the decades beginning with 1400, 1410, 1420, 1430, 1480 and 1490 are wanting. The effectiveness of the representation is corroborated by Table II, which, it may well be assumed, would have filled up many gaps in the 12th, 13th and 14th centuries, if the exact dates of the manuscripts listed in it were known. The effectiveness will be found still more corroborated by the exact dates given in Table III. With Tables I and III combined, there remain only 9 decades unrepresented; *viz.*, those beginning with 1040, 1100, 1140, 1150, 1430, 1480, 1650, 1710, and 1740, and some of these probably are covered by Table II.

There are only two manuscripts dating before 1675 A.D., which are written on Borassus leaves. These are Nos. 60 and 61, belonging to 1587 and 1594 A.D. respectively. No. 61 is written wholly on Borassus leaves; while No. 60 is only so partially: the body of it is written on Corypha leaves, while the end is on a Borassus leaf. These are exceptional cases. they only indicate, as I shall show further on, that the use of Borassus leaves first began in a sporadic form in Southern Bengal. But for Northern India generally, Table I shows that we may take the year 1675 A.D. as the epoch that marks the change from the use of Corypha to that of Borassus.

Before proceeding further, it may be as well at once to meet an objection that might suggest itself. It appears to be believed that Borassus leaves are much less durable than Corypha leaves. This may or may not be true: I have no special evidence on the subject. But Dr. Burnell in his *South-Indian Palaeography* (2nd ed.), p. 41, says: "It is hopeless to look for old specimens, as palm-leaf MSS. perish rapidly in the Tamil country, where they are mostly written on leaves of the '*Borassus flabelliformis*,' far inferior to the Talipat leaves in beauty and durability." So also Mr. Simon de Silva, Mudaliyar, in Colombo informs me that "the Talipat leaf is preferred for the purpose

of book writing on account of its durability and polish." These observations may be true with regard to Southern India and Ceylon; they would probably also apply to Bengal and Orissa with their equally damp climate; but would hardly apply to the rest of Northern India with its far drier climate. But be that as it may, I have drawn up Table III for the purpose of showing how little probability there is that all Borassus MSS., dating before 1675 A.D., may have perished on account of their inferior durability, or that, by some unaccountable and improbable chance, none of them may have fallen into my hands when making up Table I.

TABLE III.

No.	A. D.	Date.	Reference.	Loc.	Mat.	Measure.
1	1039	Nep. 159.	Add. 1683, Bendall.	Nep.	Cor.	21 × 2
2	1054	14 Nayapāla.	Add. 1688 do.	Bih.	Cor.	22 × 2
3	1065	Nep. 185.	Add. 1684 do.	Nep.	Cor.	21 × 2
4	1068	Nep. 188.	Add. 1680 do.	Nep.	Cor.	11 × 2
5	1098	Sam. 1154.	Peterson ⁵ , No. 13.	W. Ind.	(Cor.)	73 × 1½
6	1123	Sam. 1179.	Kielhorn, No. 42.	W. Ind.	Cor.	13 × 2½
7	1125	Sam. 1181.	Peterson ⁵ , No. 229.	W. Ind.	Cor.	13½ × 1½
8	1125	Sam. 1181.	Peterson ⁵ , No. 66.	W. Ind.	(Cor.)	12 × 1½
9	1130	Sam. 1186.	do. No. 40.	W. Ind.	Cor.	10 × 1½
10	1130	Sam. 1186.	do. No. 63.	W. Ind.	(Cor.)	13 × 1
11	1131	Sam. 1187.	do. No. 36.	W. Ind.	Cor.	27 × 2½
12	1162	Sam. 1218.	do. No. 31.	W. Ind.	Cor.	14 × 2
13	1162	Sam. 1218.	Kielhorn, No. 13.	W. Ind.	Cor.	29 × 2½
14	1165	Nep. 285.	Add. 1693, Bendall.	Nep.	Cor.	17 × 2½
15	1165	Sam. 1221.	Peterson ⁵ , No. 240.	W. Ind.	Cor.	27 × 2½
16	1173	Sam. 1229.	do. No. 215.	W. Ind.	Cor.	14½ × 1½
17	1175	Sam. 1231.	Peterson ⁵ , No. 1.	W. Ind.	Cor.	12 × 1½
18	1191	Sam. 1247.	Peterson ⁵ , No. 225.	W. Ind.	Cor.	13½ × 1½
19	1193	Sam. 1249.	do. No. 309.	W. Ind.	Cor.	29 × 2½

No.	A. D.	Date.	Reference.	Loc.	Mat.	Measure.
20	1199	Nep. 319.	Add. 1657, (2), Bendall.	Nep.	Cor.	12 × 2
21	1202	Sam. 1258.	Peterson ⁵ , No. 65.	W. Ind.	Cor.	12 × 1½
22	1204	Sam. 1260.	Peterson ⁵ , No. 189.	W. Ind.	Cor.	15½ × 1½
23	1205	Sam. 1261.	do. No. 220.	W. Ind.	Cor.	33½ × 2½
24	1205	Nep. 325.	Add. 1644, Bendall.	Nep.	Cor.	21 × 2
25	1207	Sam. 1263.	Peterson ⁵ , No. 198.	W. Ind.	Cor.	10½ × 1½
26	1215	Sam. 1271.	Peterson ⁵ , No. 80.	W. Ind.	Cor.	16½ × 1½
27	1228	Sam. 1284.	do. No. 78.	W. Ind.	Cor.	11 × 2½
28	1228	Sam. 1284.	Peterson ⁵ , No. 226.	W. Ind.	Cor.	14 × 2½
29	1230	Sam. 1286.	do. No. 288.	W. Ind.	Cor.	34½ × 2½
30	1231	Sam. 1287.	do. No. 266.	W. Ind.	Cor.	15½ × 1½
31	1232	Sam. 1288.	Peterson ⁵ , No. 55.	W. Ind.	Cor.	15 × 2
33	1235	Sam. 1291.	Peterson ⁵ , No. 320.	W. Ind.	Cor.	36 × 2½
33	1236	Sam. 1292.	do. No. 217.	W. Ind.	Cor.	33½ × 2½
34	1236	Sam. 1292.	do. No. 300.	W. Ind.	Cor.	36 × 2½
35	1236	Sam. 1292.	do. No. 277.	W. Ind.	Cor.	15½ × 2
36	1237	Sam. 1293.	do. No. 267.	W. Ind.	Cor.	14½ × 1½
37	1237	Sam. 1293.	Peterson ⁵ , No. 46.	W. Ind.	Cor.	12 × 1½
38	1238	Sam. 1294.	do. No. 34.	W. Ind.	Cor.	29 × 2½
39	1238	Sam. 1294.	Peterson ⁵ , No. 186.	W. Ind.	Cor.	14½ × 2
40	1238	Sam. 1294.	do. No. 275.	W. Ind.	Cor.	29½ × 2½
41	1240	Sam. 1296.	do. No. 202.	W. Ind.	Cor.	12½ × 1½
42	1240	Sam. 1296.	do. No. 250.	W. Ind.	Cor.	34½ × 2
43	1240	Sam. 1296.	Peterson ⁵ , No. 26.	W. Ind.	Cor.	32 × 2½
44	1242	Sam. 1298.	Peterson ⁵ , No. 319.	W. Ind.	Cor.	34½ × 2½
45	1243	Sam. 1299.	do. No. 276.	W. Ind.	Cor.	34 × 2½
46	1244	Sam. 1300.	Kiolhorn, No. 47.	W. Ind.	Cor.	18½ × 2
47	1245	Sam. 1301.	Peterson ⁵ , No. 219.	W. Ind.	Cor.	33½ × 2½

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
48	1245	Sam. 1301.	Peterson ³ , No. 337.	W. Ind.	Cor.	$32\frac{1}{2} \times 2$
49	1245	Sam. 1301.	do. No. 247.	W. Ind.	Cor.	$34\frac{1}{2} \times 2\frac{1}{2}$
50	1247	Sam. 1303.	do. No. 286.	W. Ind.	Cor.	$15\frac{1}{2} \times 2$
51	1248	Sam. 1304.	Kielhorn, No. 28.	W. Ind.	Cor.	15×2
52	1251	Sam. 1307.	Peterson ³ , No. 235.	W. Ind.	Cor.	$28\frac{1}{2} \times 2\frac{1}{2}$
53	1253	Sam. 1309.	do. No. 283.	W. Ind.	Cor.	18×2
54	1253	Sam. 1309.	do. No. 310.	W. Ind.	Cor.	$32\frac{1}{2} \times 2$
55	1258	Sam. 1314.	do. No. 222.	W. Ind.	Cor.	$23\frac{1}{2} \times 2$
56	1259	Sam. 1315.	Kielhorn, No. 62.	W. Ind.	Cor.	$14\frac{1}{2} \times 2$
57	1261	Nep. 381.	Add. 1706, Bendall.	Nep.	Cor.	$11\frac{1}{2} \times 1\frac{1}{2}$
58	1261	Sam. 1317.	Peterson ⁵ , No. 8.	W. Ind.	Cor.	17×2
59	1264	Sam. 1320.	do. No. 59.	W. Ind.	Cor.	33×2
60	1264	Nep. 384.	Add. 1465, Bendall.	Nep.	Cor.	13×2
61	1266	Sam. 1322.	Peterson ³ , No. 260.	W. Ind.	Cor.	$32\frac{1}{2} \times 2\frac{1}{2}$
62	1269	Sam. 1325.	do. No. 199.	W. Ind.	Cor.	$17\frac{1}{2} \times 1\frac{1}{2}$
63	1270	Sam. 1326.	do. No. 231.	W. Ind.	Cor.	$28\frac{1}{2} \times 2\frac{1}{2}$
64	1271	Sam. 1327.	do. No. 256.	W. Ind.	Cor.	$33\frac{1}{2} \times 2\frac{1}{2}$
65	1272	Sam. 1328.	do. No. 290.	W. Ind.	Cor.	27×2
66	1275	Sam. 1331.	Peterson ⁵ , No. 35.	W. Ind.	Cor.	$32 \times 2\frac{1}{2}$
67	1280	Sam. 1336.	do. No. 32.	W. Ind.	Cor.	15×2
68	1286	Sam. 1342.	Kielhorn, No. 5.	W. Ind.	Cor.	$32\frac{1}{2} \times 2\frac{1}{2}$
69	1287	Sam. 1343.	Peterson ⁵ , No. 27.	W. Ind.	Cor.	$31\frac{1}{2} \times 2$
70	1302	Nep. 422.	Add. 1306, Bendall.	Nep.	Cor.	13×2
71	1303	Sam. 1359.	Kielhorn, No. 37.	W. Ind.	Cor.	$30\frac{1}{2} \times 2\frac{1}{2}$
72	1320	Sam. 1376.	Peterson ³ , No. 262.	W. Ind.	Cor.	$37\frac{1}{2} \times 2\frac{1}{2}$
73	1324	Sam. 1380.	do. No. 253.	W. Ind.	Cor.	$33 \times 2\frac{1}{2}$
74	1327	Sam. 1383.	do. No. 285.	W. Ind.	Cor.	$19\frac{1}{2} \times 2$
75	1331	Sam. 1387.	do. No. 259.	W. Ind.	Cor.	$35\frac{1}{2} \times 2\frac{1}{2}$

No.	A.D.	Date.	Reference	Loc.	Mat.	Measure.
76	1334	Sam. 1390.	Peterson ⁶ , No. 84.	W. Ind.	Cor.	17 × 2½
77	1335	Sam. 1391.	Peterson ⁸ , No. 295.	W. Ind.	Cor.	35½ × 2½
78	1336	Sam. 1392.	Peterson ⁶ , No. 77.	W. Ind.	Cor.	15 × 2
79	1342	Sam. 1398.	do. No. 85.	W. Ind.	Cor.	17 × 2
80	1355	Nep. 475.	Add. 1697, (viii), Bendall.	Nep.	Cor.	12 × 2
81	1360	Nep. 480.	Add. 1409, Bendall.	Nep.	Cor.	13 × 2
82	1360	Sam. 1416.	Notices, No. 3308.	Beng.	Cor.	10 × 1½
83	1369	Sam. 1425.	Peterson ⁶ , No. 58.	W. Ind.	Cor.	32 × 3
84	1374	Nep. 494.	Add. 1689, Bendall.	Nep.	Cor.	16 × 2
85	1380	Nep. 500.	Add. 1685 do.	Nep.	Cor.	13½ × 2
86	1384	Nep. 504.	Add. 1488 do.	Nep.	Cor.	9 × 2
87	1386	Nep. 506.	Add. 1698 do.	Nep.	Cor.	13 × 2
88	1389	Nep. 509.	Add. 1701 do.	Nep.	Cor.	12 × 2
89	1389	Sam. 1445.	Peterson ⁸ , No. 304.	W. Ind.	Cor.	34½ × 1½
90	1392	Nep. 512.	Add. 1108, Bendall.	Nep.	Cor.	13 × 2
91	1395	Sam. 1451.	Peterson ⁸ , No. 223.	W. Ind.	Cor.	14 × 1½
92	1398	Sam. 1454.	Peterson ⁶ , No. 48.	W. Ind.	Cor.	33 × 2
93	1400	Sam. 1456.	do. No. 28.	W. Ind.	Cor.	25 × 1½
94	1412	Nep. 532.	Add. 1649, Bendall.	Nep.	Cor.	12½ × 2
95	1412	Nep. 532.	Add. 1691 (iv), Bendall.	Nep.	Cor.	12 × 2
96	1425	Nep. 545.	Add. 1661 do.	Nep.	Cor.	13 × 2
97	1427	Nep. 547.	Add. 1580 do.	Nep.	Cor.	10 × 2
98	1429	Nep. 549.	Add. 1703 do.	Nep.	Cor.	11½ × 2
99	1440	Nep. 560.	Add. 1691, (iii) do.	Nep.	Cor.	12 × 2
100	1457	Nep. 577.	Add. 1708, (i) do.	Nep.	Cor.	12 × 2
101	1460	Lakṣ. 355.	Notices, No. 1889.	Bih.	Cor.	12 × 1½
102	1463	Nep. 583.	Add. 1697 (iv), Bendall.	Nep.	Cor.	12 × 2
103	1468	Lakṣ. 363.	Notices, No. 1913.	Bih.	Cor.	13 × 2

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
104	1495	Çak. 1417.	Notices, No. 1974.	Beng.	Cor.	10 × 2
105	1518	Çak. 1440.	do. No. 1070.	Beng.	Cor.	14 × 2½
106	1526	Lakş. 421.	do. No. 1963.	Bih.	Cor.	11 × 2
107	1529	Lakş. 424.	do. No. 2390.	Bih.	Cor.	16 × 2
108	1535	Çak. 1457.	do. No. 1978.	Beng.	Cor.	15 × 1½
109	1536	Lakş. 431.	do. No. 1967.	Bih.	Cor.	11 × 2
110	1540	Lakş. 435.	do. No. 1907.	Bih.	Cor.	11 × 1½
111	1556	Çak. 1478.	do. No. 2129.	Beng.	Cor.	10 × 2
112	1564	Lakş. 459.	do. No. 1909.	Bih.	Cor.	12 × 1½
113	1571	Çak. 1493.	do. No. 2172.	N. Beng.	Cor.	12 × 2
114	1576	Nep. 596.	Add. 1355, Bendall.	Nep.	Cor.	9½ × 2
115	1607	Lakş. 502.	Notices, No. 1879.	Bih.	Cor.	11 × 2
116	1609	Lakş. 504.	do. No. 1922.	Bih.	Cor.	12 × 2
117	1617	Lakş. 512.	do. No. 2405.	Bih.	Cor.	17 × 2
118	1618	Çak. 1540.	do. No. 2749.	Beng.	Bor.	12 × 1½
119	1619	Nep. 739.	Add. 1662, Bendall.	Nep.	Cor.	12 × 2
120	1622	Çak. 1544.	Notices, No. 2252.	Bih.	Cor.	14 × 2½
121	1624 1610	Çak. 1546. Lakş. 505.	do. No. 1992.	Bih.	Cor.	11 × 2
122	1627	Lakş. 522.	do. No. 2364.	Bih.	Cor.	14 × 1½
123	1629	Çak. 1551.	do. No. 3382.	Beng.	Cor.	10 × 2
124	1629	Çak. 1551.	do. No. 2000.	Bih.	Cor.	10 × 2
125	1643	Lakş. 539.	do. No. 2399.	Bih.	Cor.	16 × 1½
126	1660	Lakş. 555.	do. No. 1910.	Bih.	Cor.	14 × 2
127	1673	Lakş. 568.	do. No. 1968.	Bih.	Cor.	12 × 1½
128	1678	Çak. 1600.	do. No. 2126.	Beng.	Bor.	10 × 1½
129	1680	Çak. 1602.	do. No. 2759.	Beng.	Cor.	18 × 2
130	1687	Çak. 1609.	do. No. 1645.	W. Beng.	Bor.	19 × 1½
131	1688	Çak. 1610.	do. No. 1642.	W. Beng.	Bor.	19 × 1½

No.	A.D.	Date.	Reference.	Loc.	Mat.	Measure.
132	1689	Lakṣ. 584.	Notices, No. 1987.	Bih.	Cor.	12 × 2½
133	1701	Çak. 1623.	do. No. 1643.	W. Beng.	Bor.	14 × 1½
134	1727	Çak. 1649.	do. No. 2370.	Bih.	Cor.	22 × 2
135	1732	Çak. 1654.	do. No. 2917.	W. Beng.	Cor.	22 × 2
136	1734	Çak. 1656.	do. No. 2965.	W. Beng.	Bor.	11 × 1½
137	1739	Çak. 1661.	do. No. 1845.	Bih.	Cor.	15½ × 2
138	1755	Çak. 1677.	do. No. 2068.	N. Beng.	Cor.	40 × 2
139	1785	Çak. 1707.	do. No. 2069.	N. Beng.	Cor.	19 × 2
140	1804	Çak. 1726.	do. No. 1129.	Beng.	Bor.	3 or 4 lines
141 ⁸	1836	Lakṣ. 731.	do. No. 1764.	Bih.	Bor.	11 × 1

In Table III, I have included none but such palm-leaf MSS., of which exact dates and measurements have been recorded. On the other hand, I have included all manuscripts, satisfying those two conditions, records of which were accessible to me: in fact, Table III, so far as I know, practically includes all such palm-leaf MSS., of which any record exists at all. I do not think it likely that any appreciable number of dated and measured manuscripts have been omitted. Those entered in Table III belong to the collections, noticed in Bendall's Catalogue of Cambridge MSS., Dr. Mitra's Notices of Sanskrit MSS., and Peterson's and Kielhorn's Reports on the Search for Sanskrit MSS. in the Bombay Presidency.⁹

As I have not actually seen and examined any of the manuscripts entered in Table III, the only test for determining their material are their measurements, especially those of their width. Now there are

⁸ The description of this manuscript in the "Notices" is wrong. It is said to be dated "L. S. 431 = A.D. 1537," but at the same time it is described as "fresh" in appearance. The fact is, the date which is in numeral words has been wrongly read. *Ambudhi* means "seven"; and the date is Lakṣ. 731 = A.D. 1836. Unfortunately the manuscript is missing from the Calcutta collection; I have not been able to see it. I may here note that though in the older usage "ocean" signifies "four," in the more modern and in the present usage it means "seven." The *Çabda-kalpa-druma* gives both meanings.

⁹ "Peterson⁸" and "Peterson⁶" in the References of Table III mean Professor Peterson's Third Report, 1884-86 (Extra Number in the Journal, Bombay Branch of the Royal Asiatic Society), and his Fifth Report, 1892-95, respectively. "Kielhorn" means Professor Kielhorn's Report for 1880-81.

in the list of Table III, 127 manuscripts, dating before 1675 A.D. Of these 127 manuscripts, 104 measure $1\frac{1}{4}$ inches or upwards in width. All these must be written on Corypha leaves; for I have already shown that no Borassus leaf admits of that width. Practically the same remark applies to No. 36, which measures $1\frac{2}{3}$ inches. There remain 22 manuscripts, measuring less than $1\frac{3}{4}$ inches in width. Of these, 18 have a width of $1\frac{1}{2}$ inches.¹⁰ There is very little probability of any of them being a Corypha manuscript: in fact, in the case of No. 57, the fact that it is written on Corypha leaves has been verified for me by Professor Cowell; and as to 6 others, viz., Nos. 101, 110, 112, 122, 125 and 127, which are Bihār manuscripts, I shall show presently that in Bihār none but Corypha leaves were used down to a far more recent date than 1675 A.D. Of the remaining 4 manuscripts, No. 89, which is $1\frac{1}{3}$ inches wide, cannot be Borassus, because of its length of $34\frac{1}{2}$ inches; nor are Nos. 5, 8 and 10, which are $1\frac{1}{4}$ and 1 inches wide respectively, likely to be Borassus, on account of their great age: that exceptionally Corypha manuscripts of such very small width are met with, I have already shown (see Nos. 35 and 55 in Table I, and No. 5 in Table II).

It thus appears that (with the exception of one manuscript, No. 118, presently to be referred to) all the manuscripts dating before 1675 A.D. are written on Corypha leaves,—a result which exactly agrees with that obtained from Table I. It is a striking fact that no dated and measured manuscript which can indubitably be proved to be written on Borassus leaves has as yet come to light, dating from before 1675 A.D., or at least (to be quite exact, with a view to the two exceptional cases of No. 60 in Table I, and No. 118 in Table III), dating from before the end of the 16th century. If Borassus manuscripts did exist, it is more than strange that not one of them should have been discovered: it is equally improbable that they—all and every one—should have perished. The only reasonable conclusion, from the facts presented, is that Borassus leaves were not used at all for book-writing in Northern India before the end of the 16th century, nor used generally before about 1675 A.D.

The exceptional case of No. 118 in Table III, dated 1618 A.D., is noteworthy. It stands, quite by itself among the surrounding Corypha manuscripts. For the next Borassus MS. we have to go down to No. 128, and the year 1678 A.D. It is also a South-Bengali manuscript. Its case agrees in every way with that of No. 60 in Table I, which has already been referred to. It must be added, however, that it is by no means certain that No. 118 is really a Borassus manuscript. Judged by

¹⁰ These are Nos. 7, 9, 21, 25, 26, 30, 37, 41, 57, 82, 91, 93, 101, 110, 112, 122, 125, 127.

its measurements it might very well be a *Corypha* manuscript. But the probability perhaps is the other way, and I have accordingly treated it so.

This leads me to the next point. Table I shows that the use of *Borassus* leaves for book-writing was, and still is, limited to the Eastern portion of Northern India, *i.e.*, to Bengal, Bihār and Orissa. In the rest of Northern India (including Nepal, and "Western India" north of Bombay), *Borassus* has never been used for that purpose: there none but *Corypha* leaves were used at all; but as I shall show further on, the use of palm-leaves for book-writing died out there as early as the middle of the 15th century on the west-coast, and in the interior even some centuries earlier. At the time when the use of *Borassus* came in in the eastern provinces of Northern India, *viz.*, in the 17th century, the use of paper had in its central and western provinces long superseded that of palm-leaves.

Even with regard to Eastern India, a striking difference shows itself between the three provinces composing it. In Bengal the use of the *Borassus* leaf makes its first appearance in a sporadic way, at the end of the 16th century, and we find it fully established a century later, from about 1675 A.D. On the contrary, in Bihār the exclusive use of *Corypha* leaves continues down to the middle of the 18th century, while in Orissa *Corypha* leaves appear to have never been used at all.

To illustrate these conclusions I have prepared the following three Tables of Bengal, Bihār and Orissa palm-leaf manuscripts respectively.

TABLE IV. BENGAL PALM-LEAF MSS.

No.	A. D.	Date.	Reference.	Measures.	Material.
1	1360	Sam. 1416.	Table III, No. 82.	$10 \times 1\frac{1}{2}$	Cor.
2	1386	Sam. 1442.	Table I, No. 45.	11×2	Cor.
3	1495	Çak. 1417.	Table III, No. 104.	10×2	Cor.
4	1514	Çak. 1486.	Table I, No. 53.	$14\frac{1}{2} \times 1\frac{1}{2}$	Cor.
5	1518	Çak. 1440.	Table III, No. 105.	$14 \times 2\frac{1}{2}$	Cor.
6	1531	Çak. 1453.	Table I, No. 54.	$18\frac{1}{2} \times 2$	Cor.
7	1535	Çak. 1457.	Table III, No. 108.	$15 \times 1\frac{1}{2}$	Cor.
8	1553	Çak. 1475.	Table I, No. 55.	$1\frac{1}{2}$	Cor.
9	1556	Çak. 1478.	Table III, No. 111.	10×2	Cor.
10	1571	Çak. 1498.	do. No. 112.	12×2	Cor.

No.	A.D.	Date.	Reference.	Measure.	Material.
11	1572	Çak. 1494.	Table I, No. 57.	$13\frac{1}{2} \times 1\frac{1}{2}$	Cor.
12	1587	Çak. 1509.	do. No. 60.	$12 \times \begin{Bmatrix} 1\frac{1}{2} \\ 1\frac{1}{2} \end{Bmatrix}$	Cor. Bor.
13	1594	Çak. 1516.	do. No. 60.	$12 \times 1\frac{1}{2}$	Bor.
14	1618	Çak. 1540.	Table III, No. 118.	$12 \times 1\frac{1}{2}$	Bor.
15	1629	Çak. 1551.	do. No. 122.	10×2	Cor.
16	1675	Çak. 1597.	Table I, No. 70.	$1\frac{1}{2}$	Bor.
17	1677	Çak. 1599.	do. No. 71.	$1\frac{1}{2}$	Bor.
18	1678	Çak. 1600.	Table III, No. 128.	$10 \times 1\frac{1}{2}$	Bor.
19	1678	Çak. 1600.	Table I, No. 72.	$15\frac{1}{2} \times 2$	Cor.
20	1680	Çak. 1602.	Table III, No. 129.	18×2	Cor.
21	1687	Çak. 1609.	do. No. 130.	$19 \times 1\frac{1}{2}$	Bor.
22	1687	Çak. 1609.	Table I, No. 76.	$11 \times 1\frac{1}{2}$	Bor.
23	1688	Çak. 1610.	do. No. 77.	$20 \times 1\frac{1}{2}-1$	Bor.
24	1688	Çak. 1610.	Table III, No. 131.	$19 \times 1\frac{1}{2}$	Bor.
25	1689	Çak. 1611.	Table I, No. 78.	$14 \times 1\frac{1}{2}$	Bor.
26	1701	Çak. 1623.	Table III, No. 134.	$14 \times 1\frac{1}{2}$	Bor.
27	1721	Çak. 1643.	Table I, No. 82.	$2\frac{1}{2}$	Cor.
28	1732	Çak. 1654.	Table III, No. 136.	22×2	Cor.
29	1734	Çak. 1656.	do. No. 137.	$11 \times 1\frac{1}{2}$	Bor.
30 ¹¹	1755	Çak. 1677.	do. No. 138.	40×2	Cor.
31	1785	Çak. 1707.	do. No. 139.	19×2	Cor.
32	1804	Çak. 1726.	do. No. 140.	3 or 4 ll., $1\frac{1}{2}$	Bor.
33	1815	Çak. 1737.	Table I, No. 87.	$14\frac{1}{2} \times 1\frac{1}{2}-1$	Bor.

It will be seen from Table IV, that up to 1587 A.D. *Corypha* leaves were in exclusive use in Bengal. In that year the first trace of the use of *Borassus* leaves makes its appearance. In 1594 there is the

¹¹ It will be noticed that the length of this manuscript (40 inches) is out of all proportion to that of all other Bengal manuscripts. I am, therefore, disposed to suspect a misprint in its record in "Notices," No. 2068.

first manuscript wholly written on *Borassus* leaves; another follows in 1618 A.D. Then comes a long interval of 57 years, up to 1675 A.D., in which there is one *Corypha* manuscript, in 1629 A.D. But from 1675, when there are numerous manuscripts recorded at very short intervals, the use of *Borassus* shows itself dominant. Among 18 manuscripts, between 1675 and 1815 A.D., there are 12 *Borassus* and only 6 *Corypha* ones; that is $\frac{2}{3}$ of the whole are *Borassus* manuscripts.

The oldest known Bengal palm-leaf manuscript is referable to the year 1360 A.D. Another described in "Notices," No. 1977, was thought by the late Rāja R. L. Mitra to be older, being supposed to be dated in Lakṣ. 102=1207 A.D. It is a *Corypha* MS., measuring $13\frac{1}{2} \times 2\frac{1}{4}$, and is certainly very old, but its date, if any, is not decipherable, and on palæographic grounds it is more likely to belong to the end of the 14th century.

TABLE V. BIHĀR PALM-LEAF MSS.

No.	A. D.	Date.	Reference.	Measure.	Material.
1	1020	5 Mahipāla.	Table I, No. 8.	$21 \times 2\frac{1}{2}$	Cor.
2	1054	14 Nayapāla.	Table III, No. 2.	22×2	Cor.
3	1120	15 Rāmapāla.	Table I, No. 16.	$22 \times 2\frac{1}{2}$	Cor.
4	1165	4 Gōvindapāla.	do. No. 21.	$22\frac{1}{2} \times 2\frac{1}{2}$	Cor.
5	1185	24 do.	do. No. 25.	$11\frac{1}{2} \times 2$	Cor.
6	1199	38 do.	do. No. 27.	$11\frac{1}{2} \times 2\frac{3}{4}$	Cor.
7	1319	Lakṣ 214.	do. No. 37.	$15\frac{3}{4} \times 1\frac{1}{2}$	Cor.
8	1446	Sam. 1503.	do. No. 47.	$13\frac{1}{2} \times 2\frac{1}{2}$	Cor.
9	1450	Lakṣ. 345.	do. No. 48.	$13 \times 1\frac{1}{2}$	Cor.
10	1460	Lakṣ. 355.	Table III, No. 101.	$12 \times 1\frac{1}{2}$	Cor.
11	1467	Lakṣ. 362.	Table I, No. 49.	13×2	Cor.
12	1468	Lakṣ. 363.	Table III, No. 103.	13×2	Cor.
13	1479	Lakṣ. 374.	Table I, No. 50.	$11\frac{1}{2} \times 2$	Cor.
14	1504	Lakṣ. 399.	do. No. 51.	$14\frac{1}{2} \times 2\frac{1}{2}$	Cor.
15	1513	Lakṣ. 408.	do. No. 52.	$13\frac{3}{4} \times 1\frac{1}{2}$	Cor.
16	1526	Lakṣ. 421.	Table III, No. 106.	11×2	Cor.
17	1529	Lakṣ. 424.	do. No. 107.	16×2	Cor.

No.	A.D.	Date.	Reference.	Measure.	Material.
18	1536	Lakş. 431.	Table III, No. 109.	11 × 2	Cor.
19	1540	Lakş. 435.	do. No. 110.	11 × 1½	Cor.
20	1557	Lakş. 452.	Table I, No. 56.	13½ × 2	Cor.
21	1564	Lakş. 459.	Table III, No. 112.	12 × 1½	Cor.
22	1575	Lakş. 470.	Table I, No. 58.	13½ × 2½	Cor.
23	1607	Lakş. 502.	Table III, No. 115.	11 × 2	Cor.
24	1608	Lakş. 503.	Table I, No. 62.	13½ × 1½	Cor.
25	1609	Lakş. 504.	do. No. 63.	13½ × 2	Cor.
26	1609	Lakş. 504.	Table III, No. 116.	12 × 2	Cor.
27	1616	Lakş. 511.	Table I, No. 64.	14½ × 1½	Cor.
28	1617	Lakş. 512.	Table III, No. 117.	17 × 2	Cor.
29	1622	Çak. 1544.	do. No. 120.	14 × 2½	Cor.
30	1624 1610	Çak. 1546 Lakş. 505.	do. No. 121.	11 × 2	Cor.
31	1627	Lakş. 522.	do. No. 122.	14 × 1½	Cor.
32	1629	Çak. 1551.	do. No. 124.	10 × 2	Cor.
33	1633	Çak. 1555.	Table I, No. 65.	12 × 1½	Cor.
34	1643	Lakş. 538.	Table III, No. 125.	16 × 1½	Cor.
35	1647	Çak. 1569.	Table I, No. 66.	11½ × 2	Cor.
36	1660	Lakş. 555.	Table III, No. 126.	14 × 2	Cor.
37	1661	Lakş. 556.	Table I, No. 67.	12½ × 1½	Cor.
38	1668	Çak. 1590.	do. No. 68.	7½ × 1½	Cor.
39	1669 1660	Çak. 1591 Lakş. 555.	do. No. 69.	7 × 1½	Cor.
40	1673	Lakş. 568.	Table III, No. 127.	12 × 1½	Cor.
41	1680	Çak. 1602.	Table I, No. 73.	14 × 1½	Cor.
42	1689	Lakş. 584.	Table III, No. 132.	12 × 2½	Cor.
43	1727	Çak. 1649.	do. No. 134.	22 × 2	Cor.
44	1739	Çak. 1661.	do. No. 137.	15½ × 2	Cor.
45	1836	Lakş. 731.	do. No. 141.	11 × 1	Bor.

Among the 45 manuscripts listed in this Table, there are 35 which, as their width shows, are undoubtedly written on *Corypha* leaves. There are only eight MSS. (Nos. 9, 10, 19, 21, 31, 34, 37 and 40) which, by their width of $1\frac{1}{2}$ inches, might be written on *Borassus* leaves. But their age, as well as their isolated position among *Corypha* manuscripts, renders it certain that they are also *Corypha* manuscripts. Indeed, as a matter of fact, Nos. 9 and 37, which I have myself inspected, are *Corypha* manuscripts. I may add that down to 1739 A.D. (No. 44) I have not found, among all the Bihār MSS. that I have examined and measured, a single manuscript written on *Borassus* leaves. So far, therefore, as evidence, at present available, goes, it points to the fact that, **down to the middle of the 18th century, *Corypha* leaves were in exclusive use in Bihar for book-writing.** About that time, perhaps, the use of *Borassus* leaves may have been introduced from Bengal; for No. 45, of 1836 A.D., is evidently a *Borassus* manuscript. Any how, in the present day, as I learn from special enquiries made by me, both kinds of palm-leaf are in use in Bihār, though, for book-writing at least, paper has nearly entirely superseded palm-leaf, so that it is very difficult now-a-days to obtain a quite modern palm-leaf manuscript. In fact, in spite of persistent endeavours, I have failed to obtain for personal inspection a single Bihār palm-leaf manuscript of the 18th and 19th centuries. This remark, regarding the supersession of palm-leaf by paper, also applies to Bengal, but not to Orissa.

With regard to Orissa I am in a somewhat unsatisfactory position. Palm-leaf manuscripts, written in Oriya, are very uncommon in Calcutta, and the majority of those one meets with are not dated. Moreover the few manuscripts which bear some date are not dated in any era, but merely in the regnal years of certain kings. I have been able to examine the following seven manuscripts:—

TABLE VI.¹² ORISSA PALM-LEAF MSS.

No.	A.D.	Date.	Reference.	Measures	Mat.
1	1660–92	Some year of Mukunda	Govt. Ind.	$1\frac{5}{16}$	Bor.
2	1683	24th do. ...	do.	$15 \times 1\frac{1}{8}$	Bor.
3	1683	24th do. ...	do.	$1\frac{1}{4}$	Bor.
4	1690	31st do. ...	No. 2837 in Notices.	$16 \times 1\frac{1}{4}$	Bor.
5	1708	17th of Divya Simha ..	Govt. Ind.	$14\frac{9}{16} \times 1\frac{1}{2}$	Bor.
6	1752	10th of Kēcarī ...	do.	$14\frac{3}{4} \times 1\frac{3}{8}$	Bor.
7	1766	24th of do. ...	do.	$15 \times 1\frac{1}{8}$	Bor.

¹² On the chronology of the kings of Orissa, see Prinsep's *Useful Tables*, p. 267 (in Vol. II of his *Indian Antiquities*, ed. Thomas), also Hunter's *Orissa* and J. I. 16

I have also examined seven other manuscripts which are undated. Their width varied from 1 to $1\frac{1}{2}$ inches, and their number of lines from 3 to 6. They were made of *Borassus* flab. Their general appearance indicates them as being of the same period as the dated ones.

I have not met with any Oriya palm-leaf manuscript of an earlier date than the 24th year of Mukunda Dēva, or A.D. 1683, though No. 1 may go back to 1660. So far as this evidence goes, it shows that Oriya palm-leaf manuscripts are not older than the second half of the 17th century, and are invariably written on *Borassus* leaves. The evidence, however, is not complete. It seems to be certain that the Oriyā characters were not employed in Orissa before the 15th century A.D. The earliest epigraphical record in Oriyā characters is an inscription, dated 1436 A.D., of Kapilēṣvara Dēva. The earlier inscriptions of the 13th and 14th centuries are in a species of early Bengali characters.¹⁵ It is not impossible therefore, that manuscripts may have been written in Oriyā characters as early as the 15th century A.D. Possibly among the undated manuscripts some may go back to such an early date; and it is also possible that dated manuscripts of that early period may yet come to light. In the latter case it is probable that they will be found to be *Borassus* manuscripts; for hitherto not a single manuscript written in Oriya characters is known to exist which is written on *Corypha* leaves. At present, however, there is a gap of 200 or 250 years (about 1436–1660 A.D.) in the evidence. On the whole, the probability is that the case of Orissa is much the same as that of Bengal. If *Corypha* leaves were ever used in Orissa at all, their use must have gone out of fashion, as it did in Bengal, in the course of the 16th century. At present, the available evidence

elsewhere. The exact periods of the several reigns are only approximately known. There were three Mukundas and two Divya Siṁhas. The former reigned 17, 32, and 19 years respectively; accordingly it must be Mukunda II who is referred to in Table VI, and who reigned, approximately, from 1660 to 1692 A.D. The two Divya Siṁhas reigned 28 and 18 years respectively; probably it is Divya Siṁha I who is here intended, and who reigned from 1692–1720 A.D. Kēçari Dēva (in Prinsep, *Bir Kishore Deo*) reigned from 1743–1780 A.D. In the manuscripts the reigns of these kings are quoted in *aṅkas*. On the method of converting these *aṅkas* into regnal years, see Bābū Mon Mohan Chakravarti's explanation in *Journal, A.S.B.* vol. LXII, (1893), p. 89. The number one and all numbers ending with zero (except 10) or with 6 are omitted. Hence the 29th *aṅku* of Mukunda is equal to his 24th year; i.e., 5 *aṅkas* (1, 6, 16, 20, 26) are omitted; and so forth. The *aṅkas* of Table VI are: 38 (No. 4), 29 (Nos. 2, 3 and 7), 21 (No. 5), 12 (No. 6). No. 1 simply refers to the reign of Mukunda.

¹⁵ See *Journal, A.S.B.* Vol. LXII (1893), p. 88, 89. Also *ibidem*, Vol. LXIV (1895) and Vol. LXV (1896).

is dead against the use of *Corypha* leaves in Orissa. Not a single *Corypha* manuscript in Oriyā characters has as yet been discovered.

Let us now turn to Western India. Here we have the careful catalogues prepared by Professors Kielhorn, Peterson and Bhandarkar. In his Report for 1880-81, Prof. Kielhorn describes 77 palm-leaf MSS. from Pātān. Prof. Peterson in his 3rd Report for 1885-86, describes 157 palm-leaf MSS. from Cambay (Nos. 181-338), and in his 5th Report for 1892-95 he describes 93 palm-leaf MSS. from Pātān. Measurements, however, are only given of 69, 147 and 62 manuscripts respectively of the three sets. The total of measured manuscripts accordingly is 278. Among these there are :

(1) MSS. measuring $1\frac{3}{4}$ inches and more,	230
(2) MSS. " $1\frac{1}{2}$ inches	38
(3) MSS. " less than $1\frac{1}{2}$	10

This statement includes both kinds of manuscripts, undated as well as dated ones, and, therefore, supplements the information given in Table III.

The first-placed manuscripts, of course, as shown by their width, must be *Corypha* ones; so also, are in all probability, the 38 manuscripts of the width of $1\frac{1}{2}$ inches. More doubtful might seem the case of those ten which measure less than $1\frac{1}{2}$ inches. Among these there are 8 manuscripts which are said to measure only $1\frac{1}{8}$, $1\frac{1}{3}$, or $1\frac{1}{4}$ inches, and two manuscripts which are said even to be only one inch wide.¹⁴ Four of these 10 manuscripts, being dated, will be found included in Table III; *viz.*, Nos. 10 ($1'$ wide), 5 and 8 ($1\frac{1}{4}''$), and 89 ($1\frac{1}{3}''$); and in connection with that Table it has been shown what little probability there is that any of these 10 manuscripts should be *Borassus* ones. As a matter of fact (I may add here), I have found by ocular examination of Kielhorn's No. 34 (or No. 35 in Table I) that among its leaves there are some which are only $1\frac{1}{4}$ inches wide, but which still are *Corypha* leaves: which circumstance shows that extreme narrowness of the leaves need not preclude their being *Corypha*. It may, therefore, be taken for certain that in Western India none but *Corypha* leaves were ever used for book-writing.

We will now turn to the paper manuscripts. For Eastern India (Bengal, Behar and Orissa) the "Notices of Sanskrit Manuscripts" afford a fair statistical text. I have classified all the dated paper MSS. which are enumerated in volumes I to X, according to centuries, down to 1850, in the subjoined Table VII, in which I have added similar information,

¹⁴ These are Peterson's Nos. 7, 63 (both one inch), Peterson's No. 13, Kielhorn No. 40, Peterson's Nos. 50, 66 (all four, $1\frac{1}{4}''$); Peterson's Nos. 304, 305, 308 (all, $1\frac{1}{3}''$); Peterson's No. 216 ($1\frac{1}{8}''$).

for Western India, gathered from the Reports of Professors Bhandarkar, Kielhorn and Peterson.¹⁵ For my present statistical purpose these Reports, unfortunately, are not so well fitted as the "Notices;" still such as they are, their evidence distinctly tends in the same direction. A considerable portion of the manuscripts described in the "Notices" belong to the North-West Provinces and Oudh, which form the central portion of Northern India. Accordingly the column for the "Notices" is divided into East and Centre.

TABLE VII.

PERIODS.	NOTICES.			BHAN-DARKAR.		KIELHORN.		PETERSON.	
	East.		Centre.	West.					
	Palm-leaf.	Paper.		Paper.	Palm-leaf.	Paper.	Palm-leaf.	Paper.	Palm-leaf.
(1) 1050-1150				7		6		14	
(2) 1150-1250			1	14		5		68	
(3) 1250-1350			1	13	1	6		46	
(4) } 1350-1400	2	1	1	3	2		2	4	10
(5) } 1400-1450		1	4		5	2	9	1	27
(6) 1450-1550	12	7	8		20		47		61
(7) 1550-1650	16	14	40		61		53		162
(8) 1650-1750	18	56	70		93		65		240
(9) 1750-1850	5	107	201		96		48		369

The general drift of this evidence is to show that from the end of the 13th and the beginning of the 14th centuries paper began to

¹⁵ These are Bhandarkar's Report for 1882-83; Kielhorn's Report for 1880-81, containing also a list of the collection in 1873-74; Peterson's Second Report for 1882-83 (being an Extra Number of the Journal of the Bombay Branch of the Royal Asiatic Society for 1883); his Third Report for 1884-86 (being another Extra Number for 1887); his Fifth Report, for 1892-95, and his Sixth Report, for 1895-98.

supersede palm-leaf as a material for writing books. The drop in the number of palm-leaf manuscripts between the third and fourth periods is very noticeable; and from the fourth period onwards there is a steady and marked rise in the number of paper manuscripts.

In Western India the supersession of palm-leaf was far more thorough than in Eastern India. **About the middle of the 15th century**,--so far as the evidence at present available goes,—**the use of palm-leaf entirely ceases in Western India.** The three latest palm-leaf manuscripts are dated, one in A.D. 1449 (Sam. 1505), and two in A.D. 1400 (Sam. 1456): see Kielhorn's Report, p. v, and Peterson's Fifth Report, p. 51. During the same period (1400-1449) we have 41 paper manuscripts. The earliest paper manuscript is dated A.D. 1320 (Sam. 1376): see Bhandarkar's Report, p. 51. Then follow 14 paper manuscripts, dated between A.D. 1360 and 1395. This total cessation of the use of palm-leaf at this period is nothing new: it has already been pointed out by Professor Bhandarkar in his Report, pp. 51 and 52.

In Eastern India the use of palm-leaf continued more or less by the side of paper. The Table shows a steady and marked rise in the number of paper manuscripts, while the number of palm-leaf manuscripts remains practically stationary, ending with a marked drop in the last period. This, of course, really implies a steady decrease in the use of palm-leaf, ending with a practically total cessation, in the present day.¹⁶ In Orissa alone its use continuous to some extent. The two latest recorded palm-leaf manuscripts (both not on Corypha, but Borassus leaves) are dated A.D. 1815 (Çaka 1737; "Notices," No. 1607, Table I, No. 87) and A.D. 1836 (Laks. 731, "Notices," No. 1764, Table III, No. 141). The earliest paper manuscript is dated A.D. 1354 (Sam. 1410), and is a Behar (Maithili) manuscript, No. 1999 in the "Notices." The oldest Bengal paper manuscript is dated A.D. 1404 (Çaka 1326), being No. 2082 in the "Notices." These are two exceptional cases: **the real use of paper in Eastern India only commences about A.D. 1450, that is about one century later than in Western India.**

But the earliest paper manuscript of all, examined by me, is one in the Sanskrit College in Calcutta. It is No. 582 in Volume I of its Library Catalogue, and is dated A.D. 1231 (Sam. 1288).¹⁷ The oldest

¹⁶ Exceptionally, and for a very limited class of certain religious books, palm-leaf is said to be still used in Bengal.

¹⁷ The Calcutta Sanskrit College, in its Library Catalogue, professes to possess extraordinarily old paper manuscripts. No. 553 in Vol. I is said to be dated in 1017 A.D. or Sam. 1073; No. 371 in 1059 A.D. or Sam. 1115, No. 122 in Vol. II. in 1178 A.D. or Sam. 1234; No. 582 in Vol. I. in 1212 A.D. or Sam.

paper manuscript of all, mentioned in the "Notices" is No. 2043. It is dated A.D. 1343 (Sam. 1399), and has no string-hole, but in its place a small read disk, about $\frac{3}{8}$ " diameter. These two earliest paper manuscripts are shown in Table VII in the column for "Notices," under the heading "Centre." They are both written in a distinctly Western type of Nāgarī, and must have been written somewhere in the North-West Provinces: they do not properly belong to Eastern India. Under the heading "Centre" are entered paper manuscripts written in Nāgarī (not in Bengali, neither in Maithili) characters. All these properly belong to the North-West Provinces or Ondh, i.e., to the Central part of Northern India. It may be noticed that no palm-leaf manuscripts are recorded for this part of Northern India. This is a noteworthy fact, to which reference will be made subsequently.

To sum up the result of my enquiries into the use of palm-leaf as writing material, it appears that—

(1) Originally none but leaves of the *Corypha umbr.* palm were used throughout India. This state continued down to the 15th century.

(2) From the middle of the 15th century their use was discontinued in Western India, no other kind of palm-leaf replacing them.

(3) From the beginning of the 17th century they ceased to be used in Bengal and probably Orissa, the leaves of the *Borassus jl.* taking their place.

(4) In Behar their exclusive use continued down to the middle of the 18th century.

(5) The use of the *Borassus flab.* is comparatively modern, and it is, and was, nowhere current in Northern India, outside Bengal and Orissa.

(6) Paper began to come into use, in the Centre of Northern India, in Western India and in Eastern India about the middle respectively of the 13th, 14th and 15th centuries.

(7) In the Centre and West it entirely superseded, in the 15th century, the writing-material previously in use, that is, palm-leaf in the West and perhaps birch-bark in the Centre. In the East it maintained a finally successful rivalry until comparatively recent times.

1268; No. 529 in A.D. 1320 or Sam. 1376. I have examined all these manuscripts. They are all written in Nāgarī, and are North-Western manuscripts (not Bengali). No. 553 is as modern a manuscript as one can wish, and is dated Sam. 1873, or A.D. 1817! No. 371 is dated Sam. 1715 or A.D. 1659. No. 122 is dated Sam (i.e., Bengali year, not Samvat) 1234, equal to A.D. 1826. No. 582 is doubly dated in Sam. 1288 (not 1268 as the Catalogue reads), and Çaka 1152, which is A.D. 1231 (viz., 1288-57 and 1152+79); this is the only really old paper manuscript. No. 529 is not dated at all, the compiler of the Catalogue having mistaken some blurred Nāgarī akṣaras for numeral figures.

The *Corypha umbraculifera* being a South-Indian tree, it is clear that its leaves, prepared to serve as writing material, must have formed an article of trade from very early times, and been carried as merchandise over the whole of Northern India. The customers of it, of course, were almost wholly limited to the literary classes, who wrote and copied books, *i.e.*, to the learned in schools and monasteries, etc. Paper came in with the Muhammadans, in the 11th century. It only very slowly and gradually displaced the *Corypha* palm-leaf, the use of which had the sanction of age and religion among the conservative Indian literates: they looked with distrust upon the product of the *Mlecchas*. The paper-makers are still, as a rule, Muhammadans; and there exists no indigenous Sanskrit term for paper, the word universally used being *kāṇḍaj* or *kāṇḍat*.¹³ With the 14th century, paper began to grow more widely into favour, and the import trade of *Corypha* leaves proportionately declined. With the beginning of the 17th century we find that paper has displaced the *Corypha* leaves throughout Northern India excepting Behar, and the trade with it had practically ceased. Palm-leaves were still occasionally wanted; and thus it came to pass (so it seems) that the people of Bengal and Orissa took to the use of the *Borassus flabellifer* which grew plentifully in their own country, because they could no more readily obtain suitable *Corypha* leaves in sufficient quantities. It is curious to observe that the literati of Behar were the most conservative in the retention of the use of the *Corypha* leaves; for their latest *Corypha* MS. is dated A.D. 1739 (No. 44 in Table V).

It would seem that the use of the leaves of the *Borassus* palm was introduced into Eastern India from the South. For its use in Southern India can be traced to a much earlier period. As Table II shows, the earliest recorded *Borassus* manuscript in Southern India may be referred to about 1550 A.D., and since that time *Borassus* is generally, though not exclusively, made use of, in Southern India, for book writing, *Corypha* also being used occasionally. The case of Southern India, however, I have not been able to thoroughly investigate. In Ceylon the use of *Corypha* leaves appears to be still predominant; in fact, for book writing, I am informed, it is still in exclusive use. The cause or causes that led to the *Borassus* growing into favour, and more or less displacing the time-honoured *Corypha* are obscure. It

¹³ This is a Hindū corruption of the Persian *kāḡhaz* (کاغذ), which itself is a corruption of the Chinese *kog-dz*, the name of their "paper made of the bark of the paper-mulberry tree." When the Arabs, in the 8th century, learned paper-making from the Chinese, they adopted the Chinese name for their own paper made of linen rags. See Professor Fr. Hirth's *Indische Studien*, p. 263, and Professor Karabačok's *Führer durch die Ausstellung der Papyrus Erzherzog Rainer*.

would be interesting to know them, and they would be worth investigation. Perhaps it may be found that the *Borassus* palm was introduced into India only at a comparatively recent period, and being a more useful tree than the *Corypha*, it was more frequently cultivated, and more extensively employed. Of the *Borassus* palm almost everything can be used: its fruits and buds are edible, its juice is made into liquor, its leaves can be used for domestic and literary purposes, its trunks are shaped into boats; and so forth. Of the *Corypha* palm neither the fruit is edible nor the juice potable. Being a far more useful tree, the *Borassus* would naturally soon become a greater favorite even with respect to such a matter as the leaves for writing purposes in which it is perhaps hardly superior to the *Corypha*. But it is difficult to suppose that the employment of the *Borassus* leaves as a material for writing can be separated by any long interval from the introduction of the *Borassus* palm into India. The tree could not well have existed long in India without its useful properties being discovered. If the use of its leaves for writing grew up in the 15th or 16th centuries, its introduction can hardly be placed much earlier than the 14th century.

There is a notice in Hiuen Tsiang's *Travels* (Beal, vol. ii, p. 255) of the existence of "a forest of *Tāla* trees" near Konkanapura in South-India. The exact site of that place is still a matter of dispute (see *Indian Antiquary*, XII, p. 115, XXIII, p. 28); but it must be somewhere in the Concan, which is the limit to which the *Corypha umbr.* grows freely in *cultivation* (though not *wild*). The pointed notice of the "forest of *Talipat* palms" is curious. It must have been a particular feature of that place, and must have been shown to Hiuen Tsiang as such. In the forest there was a *Stūpa*; and Hiuen Tsiang adds that "in all the countries of India the leaves of the *Talipat* palm are everywhere used for writing on." Here we seem to have a clear instance of a plantation of *Corypha* palms, on a large scale, for the purpose of growing leaves for inland use or for export. Writing was mainly carried on in Buddhist and other monasteries, and probably there were *Corypha* plantations connected with most of the larger monastic establishments in South India; only the Konkanapura plantation would seem to have been one on a particularly large scale.

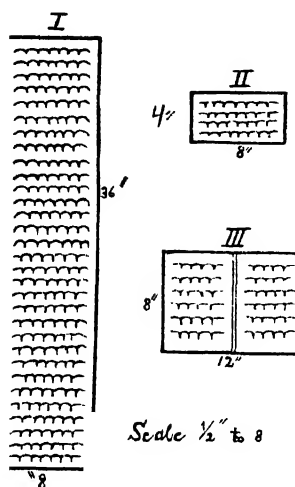
There is a puzzling notice in Alberuni (Sachau, vol. i, p. 171). He says: "The Hindus have in the South of their country a slender tree like the date and cocoanut palms, bearing edible fruits, and leaves of the length of one yard, and as broad as three fingers, one put beside the other. They call these leaves *tārī*, and write on them. They bind a book of these leaves together by a cord on which they are arranged, the cord going through all the leaves by a hole in the middle of each."

This description, with the exception of the remark about the edible fruit, only fits the *Corypha* palm. At the time of Alberuni (973-1043 A.D.) the *Borassus* palm, in all probability, did not exist in India. In any case, at his time its leaves were not used anywhere in India for writing books. He says the leaves measured one yard in length, and three fingers in breadth: that gives us a leaf measuring $36 \times 2\frac{1}{2}$ inches, which, as I have shown, are nearly the maximum measurements of a *Corypha* leaf, but impossible for a *Borassus* leaf.¹⁹ He also says that the leaves are called *tārī*. At the present day, the term *tārī* (ताड़ी) is used to denote palm-wine or "toddy," which, of course, is made from the juice of the *Borassus* palm. I am not aware that the term is used anywhere for the prepared leaves of either the *Corypha* or the *Borassus*. These are called *Tālpāt* or *Tālīpāt*, and that term is applied to the *Corypha* palm in South India, and has been adopted into the Botanical terminology. In Alberuni's use of the term *tārī* for the leaves, there appears to be some misunderstanding. But a greater difficulty is his remark about the edible fruits, as Alberuni is generally a careful observer and reporter. Personally he can have had no acquaintance with the tree, as neither the *Corypha* nor the *Borassus* grows in the localities where he lived: he can only have reported what he was told. But as the *Borassus* palm is out of the question, he must either have made a slip, or the text of his work is handed down incorrectly. As immediately before he had mentioned a point of resemblance to the date and cocoanut palms, he probably now wanted to point out a point of difference, that the *Corypha* palm bore no edible fruits; he probably meant to say "a tree, slender like the date and cocoanut palms, but bearing no edible fruits."

Alberuni proceeds to say: "In Central and Northern India people use the bark of the *tūz* tree. It is called *bhūrja*. They take a piece one yard long and as broad as the outstretched fingers of the hand, or somewhat less (about 8 inches) and prepare it in various ways. They oil and polish it so as to make it hard and smooth, and then they write on it. Their letters, and whatever else they have to write, they write on the bark of the *tūz* tree." There can be no doubt that Alberuni is describing the bark of *Betula utilis*. Where he lived, the tree was probably a well-known object to him. The measurements of the strips of bark given by him are borne out by the Kharōṣṭhī birch-bark

¹⁹ In the quoted passage it seems as if Alberuni were speaking of the size of the natural leaves of the palm. Obviously this is not correct; for the size of the segment of the natural leaf of either palm, whether *Corypha* or *Borassus*, is much greater. Possibly the translation may be at fault. Anyhow, Alberuni is speaking of the size of the prepared leaf.

manuscript of which portions are preserved in Paris and St. Petersburg,



and which may be as old as the 1st century A.D. The strips of bark on which this manuscript is written, measure about 8 inches (or 20 centimeter) in width and one yard, more or less, in length²⁰ (Woodcut, fig. 1). This seems to show that anciently the strips of bark were used in their full size, perhaps in the form of rolls, like Greek manuscripts of papyrus. Or their length was cut up into smaller pieces, of about 4 inches each. Such is the Bakhshālī MS., which measures about 7 by 4 inches. The latter probably belongs to the 10th or 11th century, i.e., about the time when Alberuni lived; and

he may have been thinking of manuscripts of this kind, when he wrote his observations. The writing was made to run parallel with the narrow side of the original strip, as seen in the published plates of the Paris and St. Petersburg MS. This custom was retained, even when the strips were cut up into smaller pieces, as in the Bakhshālī MS. (Woodcut, fig. 2). The latter approaches, in its general form, the typical Indian palm-leaf *pothī*. It consists of a large number of separate oblong leaves, with the writing running parallel with the longer side of the leaf; only the oblong is not so decidedly elongated as in the palm-leaf, and the string-holes are wanting. Still later, after Alberuni's time, the modern book form appears to have been introduced. The strips of bark, cut into smaller pieces of about 12 inches, were folded in the middle, making up a "form" of two leaves or four pages; and the writing was now made to run parallel with the narrow side of the page, so that, if the form is unfolded into the original sheet or strip, the

²⁰ The exact length is uncertain. M. Senart has measured one of the length of 4 feet (or 1 m. 23), but states that the strips evidently vary in length. See *Journal Asiatique*, 1898. See also Professor V. Oldenburg's Report in the Transactions of the Imperial Russian Academy, for 1897. Woodcut, fig. 3 shows the exact measurements of a Çaradā manuscript in my possession, about 250 years old.

writing is seen to be in two columns and running parallel with the longer side of the strip as shown in fig. 3 of the Woodcut.

A noteworthy point in Alberuni's statement is that it seems to assert that, in his time at least, the use of birch-bark was peculiar to Central and Northern India, while palm-leaf was peculiar to Southern India. At first sight this assertion does not seem to be borne out by the evidence set out in the earlier part of this paper. Hiuen Tsiang also states explicitly that in his time (7th century) palm-leaf was used throughout India, and he travelled over the whole of India, and was in touch with the literary classes of India. All depends on the exact meaning of Alberuni's terms. That he cannot have included in his "Northern India" those portions which I have denoted Western and Eastern India is clear from the fact shown by my evidence that all the oldest manuscripts of those parts of Northern India, going back practically to the time of Alberuni himself, are of palm-leaf. There is no reason why birch-bark manuscripts should not have survived as well as palm-leaf manuscripts in the libraries of Pātān and Cambay, and elsewhere, if any birch-bark manuscripts had existed at all. That birch-bark manuscripts are quite capable of surviving for so long a time is proved by the Bower MS. Alberuni's "Northern India" must be limited to the Panjāb, Sindh, Rājputānā and Kashmir, and his "Central India" must mean the North-West Provinces and Oudh, or what I have called the "Centre" of Northern India. In fact, Alberuni's terms are bounded by about the 24th Lat. and 85th Long., and India below the 24th Lat. is what he designates "Southern India." Understood in this sense, his statement is probably quite correct. It is true the evidence available on the point is very scanty. The only three birch-bark manuscripts of any considerable age, which are known to have survived are (1) the Paris and St. Petersburg MSS., (2) the Bower MS., and (3) the Bakhshālī MS. They all come originally from that portion of India which Alberuni includes in his "Northern India;" and—so far—they show that birch-bark was used there for book-writing. Nos. 1 and 2 are much older than Alberuni's time. No. 1 dates probably from the 1st or 2nd century A.D., the period of a still strong Greek influence, and its apparently roll-like form may be due to that influence. No. 2 dates from about 450 A.D., and is in the Indian Pōthī form, oblong, like the corypha leaf, with a string-hole.²¹ It belongs to a period of a still strong Buddhist intercourse between what Alberuni calls "Southern India" and Central Asia. This may account for its distinctly Indian Pōthī form. No. 3 probably dates from about the

²¹ The Bower MS. contains several distinct works, written on leaves of two distinct sizes, $11\frac{1}{2} \times 2\frac{1}{4}$ " and 9×2 ", but both imitating the Corypha leaf.

time of Alberuni himself. Its form is peculiar. It resembles the Indian *Pothī*, in consisting of separate leaves, not "bound" in a book, but tied together in a bundle: but it differs from the *Pothī* in not having any string-hole for the passage of the tying string. The string-hole was probably omitted as being too risky for the material. It also differs in its shape, being squarish ($7 \times 4''$), and not so distinctly oblong as the common Indian *Pothī*, made with the long narrow palm-leaves. Now it is noteworthy that the two oldest paper manuscripts known to us point to their having been made in imitation of such a birch-bark prototype as the Bakhshālī MS. The oldest paper manuscript, dated 1231 A.D. (*supra*, p. 121) has exactly the same squarish shape; it measures 6×4 inches. The next oldest paper manuscript, dated A.D. 1343, is rather more oblong, measuring $12\frac{1}{2} \times 5$ inches, but it has no string-hole. Both these manuscripts come from that part of India which Alberuni calls "Central India as above explained." It seems permissible to conclude that when paper came into use, its leaves were cut and treated in imitation of birch-bark book-leaves in those parts of India where birch-bark was the common writing material, and that it was cut and treated in imitation of palm-leaf, wherever the latter material was used for book-writing. In this connection it is worth noting that no old palm-leaf manuscripts are known to come from Alberuni's "Northern and Central India," though, considering the scanty survival of birch-bark manuscripts, too great importance may not be attached to this point.²² Regarding this point of survival, it may be noted that it applies equally to all kinds of manuscripts, whether of paper or of birch-bark or of palm-leaf. This circumstance shows that the cause of the non-survival is not to be sought in the climatic conditions of Alberuni's "Northern and Central India." These need not have prevented a reasonable amount of survival. The cause is probably rather to be sought in the political and religious troubles which so frequently convulsed those portions of India. During the Muhammadan conquest, for example, large destructions of Hindu literary works are reported to have taken place.

In this connection there is another interesting point to be noted. The Bower MS., which is written on birch-bark and is certainly as

²² There are a few very old palm-leaf manuscripts, but they all come from Western India; at least there is no reason to assume any other place of origin for them. They are enumerated in Table I, Nos. 1-5. No. 5 is dated by Mr. Bendall in the Harṣa era, and this might seem to suggest the "Centre" of Northern India as its place of origin. But, in the first place, the date may be, and as I believe is, more probably, referable to the Gupta era, in which case the date of the manuscript is A.D. 571-2. In the second place, considering the wide extension of the Harṣa empire, even a Harṣa date is not incompatible with a Western Indian origin which on general grounds is far more probable.

early as the middle of the 5th century, is fashioned exactly like the typical Indian Corypha palm-leaf manuscript. It consists of separate leaves, provided with a string-hole, and these leaves measure from 2 to $2\frac{1}{2}$ inches in width, which is the width of the Corypha leaf. But further, all the oldest paper manuscripts from Kuchar imitate the Indian Corypha leaf manuscripts, as may be seen from the specimens of the Weber MSS. and the Macartney MSS. which I have published. They all consist of separate, elongated oblong leaves, from $2\frac{1}{4}$ to $2\frac{3}{4}$ inches wide, with a string-hole, and with the writing running parallel with the longer side of the leaf. Everything points to the inscribed Corypha leaf as the model, not even to a Borassus leaf. The Bower MS. and those Weber and Macartney MSS. which are written in Indian Gupta characters must have been written by native Indians migrated to Kuchar, while the other Weber and Macartney MSS. written in the Central Asian modification of the Indian Gupta were probably written by native Kuchāris.²³ Why should the people of Northern India and of Central Asia have gone to the trouble of cutting up birch-bark and paper into the shape of palm-leaves, when both kinds of material more naturally lent themselves to other (square) forms, which for writing purposes one would have thought to be obviously more convenient than the long narrow strips of palm-leaf? What else could have caused this, but the sanction of immemorial usage among the literary classes of India, the learned and the "religious," those who occupied themselves with the composing and copying of books; and with the spread of Indian culture, through the Buddhist propaganda, its fashions of writing went with it beyond the borders of India. At the same time the circumstance that they imitated the oblong shape of the palm-leaf rather than the squarish shape of the birch-bark leaf clearly points to the conclusion that the writers of the manuscripts in question either came from Western India, or, at least, were influenced by the literary customs prevailing in that part of India—the part which is included in Alberuni's Southern India.²⁴

This suggests another thought. The Corypha palm is a South Indian tree. Its leaves established that immemorial and so strongly

²³ See my paper in the *Journal, A.S.B.*, Vol. LXVI, pp. 257, 258.

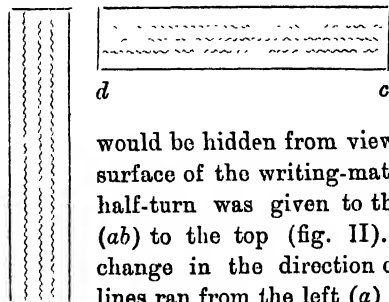
²⁴ This view is confirmed by the circumstance that the leaves of some of the Weber and Macartney MSS. are numbered on their obverses. This, as the late Professor Bühler has pointed out (see *Vienna Oriental Journal*, Vol. VII, p. 261), is a custom of Southern India. In Northern India the numbering is on the reverses. We thus seem here to come across a curious indication regarding the particular part of India from which the Buddhist propaganda proceeded to Eastern Turkistan. We should have to look for it in South-western India.

persistent fashion of shaping the writing material, even when it was birch-bark or paper. The people who used those leaves and thus initiated that fashion, must have been the first to learn and adopt the art of writing in India. The late Professor Bühler, in his excellent paper "On the Origin of the Indian Brāhmī Alphabet" (*Indian Studies*, No. III) and in his *Indian Palæography* (*Encyclopedia of Indo Aryan Research*, Chap. I, § 4), has shown it to be most probable that the Indian Brāhmī script is derived from a Northern Semitic alphabet and he suggests that it probably came by way of Mesopotamia and the Persian Gulf. I agree with Professor Bühler; only I believe the original of the Brāhmī script to have been, not the Phenician alphabet of the 8th or 9th century B.C., but the Proto-Aramæan of the 7th or 6th century B.C. All the trustworthy evidence, at present available, points to the conclusion that the maritime commerce of India with the West cannot have commenced before the 7th century B.C., and that it ran from the west coast of India through the Persian Gulf to Mesopotamia. At that time, there existed a flourishing land-trade between Mesopotamia and the further West through the North of Arabia. The Indian sea-trade connected with this land-trade. The latter had a script, common to all the peoples that participated in it, and it must have been this script with which the Indian merchants and mariners became acquainted in the 7th and 6th centuries B.C. This script which may be called the Proto-Aramæan, was a cursive development of the Phenician, and owed its origin to the need of a popular short script by the side of the more cumbersome cuneiform. Further all available evidence seems to show that, though there probably existed a coasting-trade all along the west-coast of India to Ceylon, the Indian sea-trade to Mesopotamia started from the northern part of the west-coast, above Bombay, in the Gulf of Cambay, where the two ancient ports of Bharoch and Supārā, already mentioned in the Jātakas, are situated. It is here, in the north-western part of Southern India that the Brāhmī script must have originated, say, between 650 and 550 B.C. It was here that the Proto-Aramæan script was introduced by the Indian mariners, and elaborated into a new script by men belonging to the literary classes of India for the benefit, primarily, of the mercantile classes. These men would not have been slow to notice the advantage of the new importation, and they would naturally alter and enlarge it, and generally adapt it to the needs of their own language and literature. The details of this process of adaptation have been very well worked out by Professor Bühler in his papers above cited. But what I wish to point out is that the three principles on which Professor Bühler shows the adaptation to have been made are most easily accounted for, if we remember the nature of the

writing material to which the Proto-Aramaean script had to be adapted. Professor Bühler accounts for them by "a certain pedantic formalism" of the Indians. But they are far more naturally accounted for by the fact that the South Indians adopted the Corypha palm-leaf to write upon, and took to the fashion of scratching their letters on them. Why they should have chosen palm-leaves and the method of scratching on them, is another question which it would be interesting to explain. But anyhow, as a matter of fact, they did make their choice in that way. And having done so, the principles above referred to followed almost as a matter of course. Considering the venation of the palm-leaf (cross-veins running at right angles with the length of the leaf), one could only scratch letters with comfort on them, if they were made "of vertical lines with appendages attached at the foot" instead of the top, and "set up straight." Considering the extreme narrowness of the palm-leaf (about $2\frac{1}{2}$ inches at most), admitting only a very small number of lines, the letters had to be "made equal in height," lest space was wasted.

In connection with this another point comes in. The Semitic script runs from the right to the left, while the Brāhmī runs from the left to the right. So far as I know, it has never been satisfactorily explained what could have induced the Indians to introduce the change. The boustrophedon method of writing which is supposed to account for the same change of direction in Greece, will not serve as an explanation; for that method has never been observed in any Indian inscription, nor is it ever noticed in Indian tradition. I should like to suggest the following explanation. The original writing material of the Indians were very narrow oblongs: bamboo-slips or palm-leaves. On these they probably wrote (as also the Chinese do) originally invertical lines, parallel with the longer

d l a a II *b* side, (*ab* in fig. I) and running, after the Semitic fashion, from the right (*a*) to the left (*d*), every letter also facing left. With this method of writing the earlier-written lines would be hidden from view by the hand as it moved across the surface of the writing-material. To avoid this inconvenience, a half-turn was given to the latter, so as to bring its longer side (*ab*) to the top (fig. II). The consequence was a complete change in the direction of writing; for now the letters on the lines ran from the left (*a*) to the right (*b*), and the lines from the top (*a*) to the bottom (*d*), parallel with the longer side (*ab*) as shown in fig. II. This is precisely the way in which all existing Indian *pothis* are written. By the half-turn, given to the



material, all the letters written on it would also be placed on their sides, and to obviate this inconvenience, they were again set up straight, but now usually facing in the opposite direction. The original practice of vertical writing may have had a cause similar to that above suggested for the half-turn of the material: or it may have been due to the inconvenience of frequent breaks of continuity in writing extremely short horizontal lines (parallel to *ad* in fig. 1).

This paper was read to the Society in May 1898. Its publication was delayed, in the hope that I might be able to add the results of an enquiry into another source of evidence. But as my work on the British Collection of Central Asian Antiquities will prevent this for some time, it seems better to present the evidence as it stands at present, especially as it is of such a direct and reliable character. The other source I refer to is the occurrence of the names of the *Corypha* and *Borassus* palms respectively in ancient Indian literature. When the date of an ancient work is known, exactly or approximately, one would suppose the occurrence in it of the name of the palms should be a proof, first, of their existence in India at that time, and secondly, of the use of their leaves as writing material. This seems a perfectly sound assumption, but there are several pitfalls to be guarded against: (1) is the date assigned to the work reliable; (2) is the passage in which the name occurs genuinely old, or possibly a later interpolation; (3) is the application of the terms to the palms in question certain? I have not been able to spare time for the examination of this source of evidence; but I may just mention a few instructive cases to illustrate its difficulties.

(1) Professor Hara Prasad Shastri has drawn my attention to a passage in the *Lalita Vistara* (*Bibliotheca Indica* Ed., p. 526, l. 12), in which the fruit of the *Borassus flabellifer* is supposed to be referred to. As the *Lalita Vistara* certainly existed as early as the 3rd century A.D. (having been translated into Chinese in 308 A.D.), we should thus have a testimony to a very early existence of the *Borassus* palm in India. The passage runs as follows: *tad-yath=āpi nāma Tāla-phalasyu pakvasya samantavarṇṇa-cyutasya bandhan-ācraṇaḥ pīta-nirbhāso bhavati , evam=eva Bhagavato Gautamasya pariśuddham mukha-maṇḍalam, etc., i.e., "Just as the exocarp of the ripe fruit of the Tāla palm, when it drops from its stalk, is of a brilliant yellow, even so is the face of the Blessed Gautama perfectly pure."* On referring this passage to Dr. Prain, I received the following reply: "My only objection as a botanist to the identification of *Tāla-phala* with either the *Tāla* or *Tāli* palms, *i.e.*, with either the *Borassus* or the *Corypha*, is that the *bandhan-ācraṇa* (exocarp)

of both is *anything but* 'brilliant yellow.' The fruit of *Borassus* is 'rusty brown,' that of *Corypha* 'grey,' when they have respectively dropped from the stalk. Of course, there is a Palm, and that too one which is undoubtedly a native of northern India, with fruits that when ripe *do* most thoroughly deserve the description 'brilliant yellow.' This is the *Kajūr* or wild date. The difficulty then, of course, is the name; was *Tāla* ever commonly applied to what is now more generally known as *Kajūr*? I find that Dr. Watt has been informed (see his Dictionary under *Phoenix dactylifera*, the Date, and *Phoenix sylvestris*, the wild date, which is not really botanically separable from the cultivated tree) that in Sind, where, by the way, according to Mr. James and Mr. Strachan *Borassus* is not grown, one of the names of *Phoenix dactylifera* is *tār* to this day, and that in the Panjāb the name *Tārī* is still applied to the juice (taken to make Toddy) of the wild date, *Phoenix sylvestris*." This seems to me to speak for itself, and shows the necessity of caution in dealing with botanical terms occurring in old Indian literature.

(2) In the Introduction to the *Jātaka* book there occurs the following passage: *puratthābhimukho nisīdītvā ekaṃhitāla-pakkappamāṇe ekūṇapaññāsa piṇḍe katvā sabbam appodakam madhupāyāsam paribhuñji*, i.e. (as translated by Mr. Warren in his *Buddhism in Translations*, p. 74) "setting down with his face to the east, he made the whole of the thick, sweet milkrice into forty-nine pellets of the size of the fruit of the single-seeded palmyra-tree, and ate it" The meaning, of course, is that Buddha ate the milkrice in 49 mouthfuls. The passage occurs in the story of the dish of milkrice which was given by Sujātā to Buddha shortly before his enlightenment. I referred this passage to Sir George King who replied "the fruit of *Borassus* is too big to be likened to the ball which a native of India makes up when he eats rice. So I presume *Corypha* must be the species of *Tāla* meant. Its fruit is small, globular, and not longer than a walnut. The fruit of the Palmyra is of the size of a closed human fist or a cricket-ball." Measured by it the milkrice, and the "mouthful" would have been an enormous quantity. By the way, the expression "single-seeded" is curious. The rule with all palms is a single seed. The only Indian palm, which, as Sir George King informs me, has occasionally two seeds in its fruit is the *Caryota urens*, which is common enough in India and Ceylon. If the writer of the Introduction to the *Jātaka* book knew that the *Caryota* had sometimes two seeds, it would explain his applying the term "single-seeded" to the *Corypha*.

(3) There is a well-known passage in Arrian's *Indica* (Ch. VII), in which Megasthenes is quoted as saying: "They (the Indians) eat the inner bark (φλοιός) of trees; the trees are called in the speech of the

Indians *tala*, and there grows on them, just as on the tops (κορυφή) of the date palms (φοίνιξ), something like balls of wool" (οἷάπερ τολύπας). It is commonly assumed that the *tala* tree is the Borassus, and that the "something" means its fruit. But Megasthenes cannot have referred to the fruit of the tree; he clearly meant something, the nature of which he did not know; it was neither fruit nor flower, but could only be described by its resemblance. Anyhow the whole description of the tree fits neither the Borassus nor the Corypha palm. The only Indian palm which agrees with some items of the description is the *Caryota urens*. The pith of it yields sago; and tufts of a kind of woolly stuff grow at the points where the leaves join the stem (see Yule's *Friar Jordanus*, p. 17, Hackluyt Soc., 1862). These may have been intended by the "inner bark" and the "something" of Arrian. But neither the tufts, nor the fruit of this palm—and, indeed, of any palm—grows on its "top," and the reference to the date-palm remains unintelligible.

One thing is clear. The common assumption in all the dictionaries (Sanskrit or Pali) and translations that *tāla* always means the Borassus or palmyra, and *tālī* the Corypha, is quite unfounded. *Tāla* is simply the generic name of any palm, and the context must show which palm is intended in any particular case. This is certainly the case with the older Indian literature, whatever the modern usage may be.

With reference to page 124, I may now add that the earliest evidence that I can find of the existence of the Borassus palm in India, occurs in Friar Jordanus' *Mirabilia descripta*, in 1328 A.D. He calls the tree *tārī* (or *tālī*), and says that it "gives all the year round a white liquor pleasant to drink." (See Yule's *Hodson Jobson*, s.v. Toddy). The reference to the "toddy" shows that the Borassus palm is meant.

A collection of Ladakhi Proverbs.—By THE REV. H. FRANCKE, Moravian Missionary, Leh. Communicated by the Philological Secretary.

[Read June, 1899.]

The Ladakhi word for proverb is *gtamdpə* [pronounced *stamspe*] which means 'word example.' *Stamspe* is the general term for what might be called quotations, the shepherd's calender and the popular moral code.

Ladakhi popular poetry has become famous for the frequent application of the laws of 'parallelism.' Many beautiful examples, illustrative of this form of poetry, will be noticed in the proverbs.

In the following each proverb will be treated in this way—

- (a) the Proverb in the orthography of Ladaki letter writing, (b) pronunciation, (c) literal translation [does not claim to be good English], (d) application, (e) grammatical and other notes.

Concerning the orthography of (b) the following will suffice: The vowels are the Italian vowels¹, *a* rather like *e*. All accents given, refer only to the stress. *sh*=**ሐ**, *zh*=**ཨ**, *ng*=**ང**, *c*=**ཅ**, *ch*=**ཆ**, *j*=**ཇ**, *ts*=**ཅ**, *ths*=**ཅ**. The unaspirated *Tennis* holds the mean between English *tenuis* and *media*. Single *r*=**ར** *Hindustani* *r*. The *r* preceding a consonant is like the German guttural *r*, following a consonant it is like the English *r*, spoken quickly.

THE PROVERBS.

1. (a) དཔྱད་ཉིན་རིང་མོ་ལ་བྱང་བ་སྤུམ་དང་བྱོ་བ་སྤུམ་།

མི་ཆེ་རིང་མོ་ལ་སྒྱིད་བ་སྤུམ་དང་སྤྱུག་བ་སྤུམ་།

- (b) *spid' nyin ring'moa drang' sundang dro' sum*
mi'thse ring'moa skyid' sum dang dug' sum.

¹ They are long, when ending a syllable, short in all other cases.

- (c) On a spring day [there are] three colds and three warmths
In a lifetime [there are] three happy [hours] and three
unfortunate [hours].
- (d) Misery and happiness are well balanced in man's life.
- (e) *Spid nyin* is a *Compositum determinativum* formed from
spidka and *nyima*. Also *drangsum*, *drosum*, etc., must
be considered as *Composita*, which accounts for the
missing articles; the termination *la* to be pronounced *a*.
2. (a) སྒྱིད་སྤུག་མི་ལ། མཛེར་བ་ཤིང་ལ།
(b) skyid'dug mi'la, dzer'pa shing'la.
(c) Fortune [comes] to man, [as] a knot to the tree.
(d) No man knows the cause of a knot in a tree, just so
unexpectedly misery and fortune come to certain
people.
(e) *Skyiddug* is *Comp. copulativum*.
3. (a) ཐིགས་པ་སྒྲ་མཉམ་གྱི་མཚོ་གང།
(b) thigs'pa sag'na gya'thso gang'.
(c) If drops gather, [there is] a full ocean.
(d) *Gang*, though of verbal derivation, is often used without
an article to express the adjective "full."
4. (a) མུ་སྒྲུའི་ནག་རང་དང་ལྷག་ཁོག་ཟེ།
སྒྲེལ་མཛེས་མོ་ཆེ་དང་གཡག་ཁོག་ཟེ།
(b) Ma'shroi nag'rang dang lng'khog zam'
slel dos'moche dang yag'khog zam'.
(c) With [at the time of] the *nagrung* festival at Mashro
[the heat] is as great as the body of a sheep.
With the *dosmoche* festival at Leh it is like the body of
a Yak.
(d) From the peasant's calendar. Because the festival at
Leh is celebrated several weeks after that in Mashro,
it is warmer then.
(e) *Maspro* = great joy. Though in this proverb the
original pronunciation of Leh = *slel* is retained, in
ordinary speech *s* and *l* are dropped; final *l* shows a
great inclination to disappear. Sheh, a village on the
Indus, was originally spelt *shel*—crystal, because crystals
are found in the surrounding hills. *Gyapo* is said
instead of *gyalpo*, etc. *Slel* is supposed to have been

corrupted from *lal*, ruby, it having been the ruby in the crown of the old Ladakhi kings. *Dosmoche* and *nagrang* are both non-buddhist festivals. Although the *klu's* or water-snakes have nothing to do with them, they are Bon festivals, but attended by many buddhist priests and laymen. All evil spirits of the winter are driven into a cake, which is burnt outside the village. In Leh the fetish is formed of *mdosmo's*, see Jäschke's dictionary. In Mashro it is a black one. According to a different derivation this festival is called 'the black one' on account of the black coat of *Langdarma's* murderer whose deed is praised then.

5. (a) དེ་ལྟུང་གི་རྒྱ་ཁྱོད་དང་ལྷག་ཁོག་ཟམ།
 (b) spithüggi rgu'stor dang lug' khog zam'.
 (c) At the time of the *rgustor* festival at *Spithug* [the heat] is like a sheep.
 (d) Often said instead of the former.
 (e) The name of the village *Spithüg* is said to have been formerly *dpethug*, 'the arrived at likeness.' The monastery of *Spithüg* was built after the picture of a famous monastery in Lhasa. *Rgustor* is a *Comp. determ.* composed of *nyergu* = 29 and *storma*, offering. The devils are urged to enter a large cake, offered to them and the cake is burned outside the village. 29 is the date of the festival.
6. (a) ས་ལ་སྐྱ་རེ་སྒོ་རེ། ས་ལ་སྐྱིད་རེ་སྐྱག་རེ།
 (b) sa'la skya're sngo're mi'la skyid're, düg're.
 (c) On the ground [it is] alternately grey and green, with man [there is] one turn fortunate, one turn unfortunate.
 (d) See 1 (d).
 (e) In Ladakhi a single *re* has often the meaning of *some*, for instance *lorela*, in some years. Here *re* forms *Composita* with *skyabo*, *sngonpo*, etc.
7. (a) ཁ་རྒྱུ་ཅུ་འཁོར་དུས།
 ཅི་གོན་འབྱུང་དེ་ཅི་ཟེ་ཡི་དུས།
 (b) kha' ran'gu khor'dus, ci' gonbud'de, ci' zä dus'.

- (c) The time when the fly turns [flies] round the mouth, is the time of taking off all clothing and eating everything.
- (d) A description of summer in the peasant's calendar.
- (e) About *kha* instead of *khala* see 1 (e). If an *r* follows a muta, the muta is often dropped in Ladakhi, thus *rang* is said instead of *brang*; *ci* 'what' is used here in the sense of whatever.

8. (a) ཀམར་ཟོང་རིག་ཡའ་རྩུ་ལ་ལྷ་ལྷ།

རྩུ་སྤྱི་ལྷ་ས་རྩུ་ཡང་འབྱད

- (b) khar'zongi yachula Ita'ta, chu'bii ldam'chu yang bud'.
- (c) Whilst looking at the glacier water of the Kharzong pass the gathered water of Chubi (a village) is also lost.
- (d) take what is nearest!
- (e) refers to the system of irrigation. Notice the re-duplication of the verb, implying a durative sense = whilst.

9. (a) ར་མའི་ཁྲོ་ལ་གོ་བ། ལུག་གི་ཁྲོ་ལ་བེ་ཡ།

- (b) ra'mä thro'a go'a, lug'gi thro'abe'a.
- (c) In the company of goats [he says] *goa*, in the company of sheep [he says] *bea*.
- (d) Said of a man, who has no will of his own,
- (e) *Goa* and *bea* imitate the voices of goats and sheep respectively.

10. (a) དཔིད་འབད་དུས། ལྷོན་སྤུ་དས།

- (b) spid'bad'dus' ston'rdudus'.
- (c) Spring is the time of working, autumn the time of gathering.
- (d) Do everything at the proper season.
- (e) The two sentences consist each of a three-syllabled *Comps. determ.*

11. (a) དཔིད་འབད་དུས་ལ་མ་འབད་ན། ལྷོན་སྤུ་དུས་ལ་འགྱོད་འདུག།

- (b) spid' baddusla mabad'na, ston'rdudusla gyod'dug.
- (c) If you do not work in the spring working time, you will repent in the autumn gathering time.
- (e) Notice the change of *s* into *r* in *rdud* = gather.

12. (a) ལ་དྲགས་ཀྱི་ཞིང་མེས་དང་མཉམ་བོ་འབྲུག་མེད་ན།
མདོ་ཤ་གི་ལིད་ལ་སྟོན་ཐོག་ཐོབ་འདུག།

(b) Ladag'skyi zhing'shmos dang nyam'po drug' ldir'na,
do'sha gil'idla ston'thog thob'dug.

(c) When at the time of ploughing in Ladakh the thunder
sounds, they receive a harvest in *dosha* [lower Ladak]
and Gilgit.

(d) Peasant's calendar. Lower Ladak and Gilgit have an
earlier harvest than Leh.

(e) *Ldirces* is the Ladakhi for *adirba*. In this Proverb the
Genitive in *kyi* is pronounced in full. The ordinary
Ladaki Genitive has a simple *i*.

13. (a) ཡུན་རིང་ན་བྱ་རོས་ལྗང་བོ་ཚད།

(b) yünring'na ja'ros ldong'bo chod'.

(c) After a long time a dead bird [which is blown by the
wind against the trunk of a tree] cuts the trunk.

(d) With perseverance great things can be done.

(e) *Ldongbo* = *sdongbo*.

14. (a) གང་ཁྲས་ཀྱི་ཡང་མ་ལ་ལྷ་ལྷ།

དབེ་ཐུག་གི་སོ་སྟོབ་ཡང་འབྲུག།

(b) gang'lessi yang'mala lta'lta.

spid'tluggi sor'gob yang bud'.

(c) Whilst looking at the good barley of Gangles (a village)
the rough straw of Spithüg is lost.

(d) See 8 (d).

(e) About *ltalta*, see 8 (e).

15. (a) བྱ་ཚང་ས་བྱ་ཡུལ་ལ་སོང།

བྱ་ངན་འུ་རྩ་རྩ་ཅོ་ཤུལ་མཚུག་ལ་ལུས།

(b) ja'thsang'ma ja'yulla song'
jangan' ututu'tse shul'juglalus'.

(c) All birds have gone to birdland.

The bad [stupid] bird hoopoe has remained to the last.

(d) When a bad thing has been done by several, all who can,
disappear, the one who remains, is punished for all.

16. (a) དབྱར་ཉིན་ལོག་མྱེ་མན་ནས་རྫོང་མི་དབབ།
 དགུན་ཉིན་ལོག་མྱེ་མན་ནས་གང་མི་དབབ།
 (b) yar'nyin log'ste man'ne drob' mi bab',
 gun'yinlog'ste man'ne drang' mi bab'.
 (c) Unless the summer-day returns, heat will not come down.
 Unless the winter-day returns, cold will not come down.
 (d) Everything will come at the proper season.
 (e) *Mannas*, a gerund of *man*=to be not, used in the sense of
 unless, besides, etc., *yarnyin*, *gunnyin*, see *spidnyin* in 1.
17. (a) མཚན་མྱེད་ལ་དཀོན་མཆོག་ལ་གསོལ་བ་བདེ་དགོས།
 མཚན་དཀྱིལ་ལ་གཉིད་ལོག་དགོས།
 མཚན་སྒྲུང་ལ་འཇིག་རྟེན་གྱི་ལས་ལ་བསམ་བ་བདེ་དགོས།
 (b) thsanstod'la konchog'la so'va tab'rgos
 thsanskyl'la nyid'log rgos.
 thsan smad'la jig'stenni las'la sam'ba tang' rgos.
 (c) In the first part of the night you must pray to God.
 In the middle of the night you must sleep.
 In the last part of the night you must think of the work
 of this world.
 (e) For *sovu* instead of *solva*, see 4 (e). In *dgos*, must, the *d*
 is turned into *r*, *rg* is pronounced like *ch* in Loch, lake.
18. (a) འབ་རི་དྲགས་རི་ན་འབྲུལ་བ་མིག་གི་རྒྱན།
 དམན་ཚར་མོ་སྤང་ན་འབྲུལ་བ་ཡིད་ཀྱི་རྒྱན།
 (b) sha va ri'dags ri'na drul'va mig'gi gyan',
 sman thsar'mo shrang'na drul'va id'kyi gyan'.
 (c) The deer Shava walking in the hills is the delight of the
 eye, a fine girl walking in the street is the delight of
 the heart.
 (e) Notice the classical Participle in *va* in *drulva*. In proper
 Ladakhi the ending *khan* would be used.
19. (a) སྐྱག་སྒྲུའི་ཤོ་རེས་མ་སྒྲུའི་ཤོ་རེ་ལ་བྲིལ་འདྲུག།
 (b) Stag'nä sho'res Mash'roi sho'rela threl'dug.
 (c) The harelipped man of Stagna [a village] laughs at the
 harelip of Mashro.

- (d) Everybody sees only his neighbour's fault, not his own.
 (e) *Stagna* = tigernose, on account of a hill of such shape. In the Instrumental *shores*, the *s* is pronounced distinctly, although in pure Ladakhi *shores* would be spoken *shorei*.
20. (a) ཟུ་འི་ཚོད་ལ་ལྟ་སྟེ། ཉེ་ལ་སྤྱད་བརྒྱུ་མ་བཤང་།
 (b) chu'ithsod'la lta'ste, nya'la bar'zum ma tang'.
 (c) Do not grasp a fish, unless you know the depth of the water.
 (d) Do not accuse a man before the court, unless you know how rich he is. (Refers to the former bad management of justice in Ladakh).
 (e) The *ma* = not, of the second sentence silently refers also to the first.
21. (a) ཏཱ་ཞོན་གཤོ་ཆག། བོང་ཞོན་ལག་ཆག།
 (b) sta'zhon go'chag, bong'zhon lag'chag.
 (c) Horse-riding [may cause] head-breaking, donkey-riding [may cause] hand-breaking.
 (d) It is safest to remain low and humble.
 (e) The two sentences consist each of a two-syllabled *Comp. det.*
22. (a) ཏཱ་ལ་མིག་པ་རྒྱུ་བ་ཅེས་མཐོང་སྟེ།
 བོང་བྱའི་ར་གོ་མ་རྒྱུང་།
 (b) sta'la shmig'pa gyab'ces thong'ste, bon'gui ra'go ma skyang'.
 (c) Seeing [them] shoeing a horse, you must not stretch the donkey's foot [for shoeing].
 (d) Do not imitate high people and become a fool.
23. (a) བྱ་ལོན་མེད་ན་ལག་མི་དང་།
 ཚོར་ཀ་མེད་ན་དྭག་ཉིས་།
 (b) bu'lon med'na lag'midang' thser'ka med'ua star'gan nyos'
 (c) If you have no debts, you may be security for another : and if you have no sorrow, buy an old horse !
 (d) A rich and happy man may do some stupid thing.

24. (a) ཨ་བུ་ཤི་ཡིན་བསམས་བིན་ན།

དྲ་གན་ཞིག་ལ་ཅི་ལ་ས་བཙོངས།

(b) a'ba shi'in sam'spinna

star'gan cig'la cila ma tsong's.

(c) If you thought [knew], that father will die,

Why did you not sell him [before dying] for an old horse.

(d) Used derisively. You could not help your misfortune
just as you cannot sell your father.

(e) *Samspin* a contraction of *bsamspa yin*.

25. (a) བཟོད་པ་ལྟ་བུའི་དགེ་བ་མེད།

ཞེ་སྤང་ལྟ་བུའི་སྤྲིག་པ་མེད།

(b) zod'pa lta'bui ge'va med

zhed'dang lta'bui dig'pa med.

(c) There is no virtue like patience ;

There is no sin like hatred.

26. (a) ལྷ་ས་རང་སྐོ་ས་འཕྲོན་ན།

གཤེན་པོའི་ཡར་འབྲེན་ཅི་བཙོ་ཡིན།

(b) La'ma rang'go ma thon'na

shin'poi yar'dren ci co'in.

(c) If the Lama's own head does not come out [cleanly],
how will he manage (do) the drawing upwards of the
dead.

(d) Used for deriding the immoral life of the lamas.

(e) *Thonces* is verb neuter of *btonces*, to put out.

27. (a) ཤི་སོང་ཤི་སོང་ཟེར་ན།

གཤེན་མིག་རིན་ས་ལྟ་ཡིན།

(b) shi'song shi'song zer'na

shin'mig ri'nä lte'n.

(c) If you say " he is dead, he is dead,"

The eye of the dead will look out of the hill.

(d) Ladakhi superstition. It is not good to speak much of a
dead man, his eye might frighten the speaker.

- (e) For the *n* in *shinmig* or *shinpo* see also *nyin* derived from *nyima*. Syllables ending in a vowel are inclined to add a final *n*, see also *mentog* from *metog* and many others.

28. (a) རང་སྒྱེན་ཕད་གང་འབོར་ཏེ།

མི་སྒྱེན་སྒྱེ་གང་ལ་ས་བྲེལ།

- (b) rang'skyon phad'gang bor'te
mi'skyon rgye'gangla mathrel'.
(c) Putting aside the large bag [*phad*] filled with your own faults, do not mock at the little bag [*rgye*] of your neighbour's faults.
(e) *Rang skyonphad gang* and *misky on rgye gang* are *Compos. determ.* Notice the change of *s* into *r* in *rgye*.

29. (a) རང་གཞོང་མ་མཐོང་མྱེ།

མི་གཞོང་ལ་ལྟན་མོ།

- (b) rang'dong ma thong'ste
mi'dongla stad'mo.
(c) Not seeing your own [ugly] face, [you make] a scene about your neighbour's face
(d) See 28.
(e) *Ltadmo* derived from *ltaces*, to look at.

30. (a) ལག་ཤེས་ཀྱན་གྱི་གཡོག་བོ་ཡིན།

གདམ་ཤེས་ཀྱན་གྱི་དབོན་བོ་ཡིན།

- (b) lag'shes gun'gyi yog'po in'
stam'shes gun'gyi spon'bo in.
(c) Who is clever with his hands, is servant of all, who is clever in his speech, is master of all.
(e) The ending *gyi* is retained here. The proper Ladakhi would be *gunni*. The silent *g* and *d* in *gtam* and *dpon bo* become *s*.

31. (a) ཆག་བེས་འགས་བོ་ལ་ས་བྲེལ།

- (b) chag'poe gas'pola ma threl'.
(c) What is broken, must not laugh at what is cracked.
(d) See 28 and 29.
(e) *Chagpo* and *gaspo* are substantives derived from verbs.

32. (a) མ་ཤི་ཆེ་རིང་འདུག་ན་སྤྲན་མའི་སྤྲན་ཆང་ཐེར་ཡིན།
 (b) mashi'thse ring'dugna shran'mā shran'chang ster'in.
 (c) In the time I live, not die [before I shall die] I shall give you a beer of peas.
 (d) A threat. Before my death I shall find some opportunity to give you a severe beating. The beer of peas is said to be of a very bad taste.
 (e) *Mashithsering* is a *Compos. adverb. and copulat.*
33. (a) མ་བུ་བྲམ་བས་མཐུན་ཆ་ན། ཚལ་སྒོ་ཚོད་མས་ཚོད།
 (b) ma'bu drabs'thun cha'na
 thsalrgo thsod'mā chod'.
 (c) If mother and daughter agree in their counsel, breakfast may pass off well with vegetables [only].
 (d) Much displeasure can be avoided by talking over a thing, before doing it.
 (e) *Mabu* is *Compos. copulat. drabsthun comp. determin.*
34. (a) བསམ་པ་སྒྲོན་ལ་མ་བཏང་ན།
 འགྱོད་པ་རྟིང་ན་ཡོང་འདུག།
 (b) sam'ba ngon'la matang'na
 gyod'pa sting'ua young'dug.
 (c) If you do not give thought first, repentance will come afterwards.
35. (a) བོང་བྱའི་ན་མཆོག་ལ་མེར་སྒྲུག་ན། ཡང་ན་ཐལ་བ་སྒྲུག་ན།
 ཚོགས་ཡིན།
 (b) bon'gui nam'chogla ser'lugna yangnathal'ba lugna, tsogs'in.
 (c) It is all the same whether you pour gold in the ear of a donkey or dust.
 (d) Excuse of the lamas, when asked, why they do not teach the people.
 (e) In *namchog* as in many other words the silent letter of the second syllable is pronounced with the first.
36. (a) སྤྲན་མ་སྒྲག་བརྒྱབ་ན། རྟིང་མ་དགོད་མ་ཤོར།
 (b) ngan'ma rgag'gyab'na, sting'ma rgod' ma shor'.
 (c) When the man who walks first, stumbles, the man following behind, must not laugh.

- (d) Do not laugh at another man's misfortune, the same might easily come to you.
 (e) The second sentence in full would be: *stingmanas rgod ma shor*, from the follower a laugh must not flee.

37. (a) ལྷག་ནས་ཁྱི་ཡོང་འདུག་ཟེར་དེ།
 ཞ་འབྲུག་ནས་རྩོལ་འཁྲར་དེ་ཆ་ཅུག་༥

- (b) *stag'nanä khyi'yongdug zer'te*
zha'bugnä rdo'a khurte cha'rug.
 (c) Saying there comes a dog out of Stagna [a village four miles from Zhabug] they go carrying stones out of Zhabug.
 (d) Do not be afraid, there will be a helper.
 (e) *Zhabug*=*zhabub*=falling headlong into a bog; *charug*=*cha'adug*; the *d* of '*adug* becomes an *r* after a stem ending in a vowel.

38. (a) མི་ངན་ཆོག་ས་གསེབ་ལ་ཆ་ན།
 ཤིང་ངན་ཏྲ་ཀྱ་དང་ཐུག་༥

- (b) *mi'ngan thsogs' sebla cha'na*
shing' ngan ta'ku dang thug'.
 (c) When a bad man goes into the middle of a forest, he meets [finds] only with bad crooked wood.
 (d) A bad man sees only bad things and persons about him.
 (e) *Taku* is the Ladakhi for crooked, crippled, ill-shaped.

39. (a) མི་ལ་སྤྱིད་མི་ཐག་༥
 ར་ལ་ཆོལ་མི་ཐག་༥

- (b) *mi'la skyid' mithag'*
ra'la thsil' mi thag'.
 (c) Man cannot bear good fortune, [just as] a goat cannot bear [eat] grease.
 (e) *Thagces*=*thegpa*.

40. (a) ཁྱི་ལ་སྒྲུང་དང་བེ་ཏུ་ལ་ཤོ།

- (b) *khyi'a sgaldang be'daa shol.*
 (c) To the dog is a load, what the plough is to a musician.
 (d) Certain people cannot be expected to do real work.

- (e) For *a* instead of *la*, see 1. *Beda* is supposed to have been originally འཕྱེ་མེ་ལོ་, *bedol*, a travelling outcast man, about the dropping of final *l*, see 4 (e); *o* and *a* often change in verbal roots.

41. (a) དུས་འཕང་ཁྱོད་ངས། དཔོན་བོས་བཀྱོན་ཁྱོད་ངས།

- (b) stä'phang nyo'ngam, spon'boe kyon'nyon'gam.
 (c) Do you suffer from being thrown off the horse or from being scolded by your master.
 (d) Ironical inquiry, when a person is not in good spirits.
 (e) There the classical ending *am* of the question is retained, the Ladakhi has only *a*.

42. (a) སྤྱ་གུ་ལ་དཔེ་ར་དང་བཅུན་རྩུང་ལ་ཐུ།

- (b) thrug'ula spe'ra dang tsun'jungla ja'u.
 (c) Speech [of adults] is to a child, what a *ja'u* is to the *tsunjung* [the lama apprentice].
 (d) It is not good to speak of everything before children, just as the *tsunjung* is not deemed worthy to receive a *ja'u*, [after having taken part in a religious ceremony].
 (e) *Spera* is originally *dpe sgra*, for *ra* instead of *sgra*, see 7 e. *ja'u*=a little tea, because everything used to be bought with tea in Tibet, a Tibetan silverja'u=3¼ annas, btsunjung=btsunchung, see Ladakhi Grammar, laws of sound 6.

43. (a) ཁྲ་དམ་ཀོ་ལྷག་ཟེར་ས་དང་སྐྱ་མའི་ཁོ་ལྷང་ཟེར་ས་ལ་སྐྱེབ་འདུག།

- (b) kha'tä ko'wag zer'sa dang' la'mä tro'wang zer'sala hleb'dug.
 (c) He arrives at the place where the crow says *kowag* and [then], where the *lamas* say *trowang*.
 (d) Used derisively of a man, who has nothing to do and spends his life in dullness.
 (e) *Zersa* is *Compos. determin. trowang* imitates the sound of the big drum.

44. (a) སྤལ་དྱི་སྡིང་ཅན་ནི་སྡིང་བཀོལ་བཀོལ་ལ།

བོད་སྡིང་མེད་ཀྱི་སྡིང་ཕྱོར།

- (b) bal'ti nying'canni nying' kolkol'la
 bod' nying med'kyi nying stor'.

- (c) [Looking] at the tricks of the plucky Balti, the heart of the timid Tibetan is lost.
- (d) An explanation of the constant bad luck of the West-Tibetans on the ground of the national character.
- (e) *Bkolbkol* is a word which seems to occur only in this connection.

45. (a) མཉམ་པོ་འདུགས་པ་ལྷ་མ་ལ་ཁྱོད།

- (b) *nyam'po dugs'pa la'maa khyod'*.
- (c) [When] living together, [we say] "thou" to a lama.
- (d) Respect is lessened by closer acquaintance.
- (e) *Khyod* is the common word for addressing inferiors or comrades. A lama ought to be addressed with *nyerang*; *dugspa* = *dugpar*. The Supine is sometimes used instead of the Gerund.

46. (a) མནའ་མ་མནའ་མ་ཟེར་རྟེ་མི་དེ་ཡོག་མོ་ཡིན།

སྒྱུ་ལ་གཡུ་ཁྱེང་བཏག་ག་ནི་སེམ་པའི་མགོ་བསྐྱོར་ཡིན།

- (b) *na'ma na'ma zer'ra ning' mi'i yog'mo in'.*
gyab'la yu'zhung tag'ga ning sem'pa gob'skor in'.
- (c) [Although they] call her daughter-in-law, she is the servant of men. On the back many turquoises are fastened, but it is a deceit of the soul.
- (d) Refers to the low position of the Ladakhi woman.
- (e) *Zerru* and *tagga* are corrupted from *zerbar* and *btagpar*. The supine used instead of the gerund = *gyuzhung* = *gyuchung* = small turquoises. See also *buzhung* for *buchung*. All Ladakhi women wear their turquoises on a strap of leather which is fastened on the head and descends to the middle of the back. *Semba* = *sems*, soul. *samba* = thought.

47. (a) ཁྱེད་ཀྱི་ལྟ་བུ་ཟེར་བ། རྩེ་ཀའི་མིག་འབྲུལ།

- (b) *Kha'tä ko'wag zer'pa, cung'kä mig' thrul'.*
- (c) The crow has said *kowag*; [in the] eye of the raven it is mistaken.
- (d) A man may say something very nice, [for instance *kowag*] his enemy will find great faults in it.
- (e) *Zerpu* is past participle; *cungka* = *skyungka*.

48. (a) ཟ་བོ་ཁ་ཏཱ་ཟོས། ཅུང་ཀའི་ཁ་དམར་བོ།
 (b) za'o kha'tā zos', cung'kā kha' marpo'.
 (c) The [stolen] food was eaten by the crow [but the beak of the raven is red].
 (d) Often the wrong person is caught instead of the guilty one.
 (e) Zos=bzas, zos is the only past tense in Ladakhi, which changes the vowel.
49. (a) ཚེས་མཐོང་མྱ་ཁ་ལས།
 (b) thsil'thong'ste kha'gas'.
 (c) [When] seeing grease, the mouth cracks [open].
 (d) When you see something nice you want to have it.
 (e) Thsil=mutton grease, a very desirable thing in Ladakh.
50. (a) ལོ་མེད་ཚོང་ས་ལ་ཆ་ན། སྟོ་འདོད།
 (b) nor'med thsong'sala cha'na, nyo'dod.
 (c) Who goes to the shop without money, likes foolishness.
 (d) Do nothing unprepared, you might be laughed at.
 (e) Nyodod is Compos. determ. = a liker of foolishness.
51. (a) མོད་ན་མོད་ན་ངའི་སང་གྲུ་ལས་མོད།
 མོད་ན་མོད་ན་ངའི་སང་ཐུས་པས་མོད།
 (b) stod'na stod'na ngä' sang gyal'lā stod'
 smad'na smad'na, ngä' sang thus'pā smad'.
 (c) Who praises me, is a better man than I am.
 Who despises me, is a worse man than I am.
 (d) Said by a man who has heard that slander is going on about him.
 (e) For sang with the comparative, see Jäschke's grammar; rgyallas and thuspas are Instrumentals, gyalla=a good man.

A Primer of the Asur dukmā, a dialect of the Kolarian language.—By THE REV. FERD. HAHN, German Evangelical Lutheran Mission, Choṭā Nāgpur. Communicated by DR. G. A. GRIERSON, C.I.E.

[Read December, 1899.]

INTRODUCTORY REMARKS.

The Asurs are a non-Āryan tribe of Choṭā Nāgpur, who number only about 2,500 souls. They chiefly inhabit the Districts of Rañchi and Palāmāu and the Sargujā tributary state. Though small, the tribe is divided into several sections, viz., the Agōriā- the Brijā or Binjhā- the Lōharā- the Kōl- and the Pahāriā-Asurs. These sub-tribes are again divided into totemistic sections, which are similar in name to those found among other aborigines in Choṭā Nāgpur; as for example: Bes'erā=hawk; Ind=eel; Bareā=wild dog; Hōrō=tortoise; Būā=jackal; Rotē=frog, etc.¹ The chief occupation of the Asurs is melting iron and in the case of the Lōharā-Asurs the making of rude iron utensils and agricultural implements; besides they till the jungle in the most primitive manner. Their homes are made of wood, Bamboo and grass only and chiefly met with at the foot or even at the slopes of the hills which contain iron ore. When the land they have cultivated is exhausted they change their homes and move to another place in the forest.

As to religion the Asurs believe in a Creator and apparently identify him with the sun, whom they call Siṅhoṇā; no worship however is rendered to him, since he is benevolent and does not require any expiation. It is peculiar that they do not know of any evil spirits except the manes of their ancestors, which alone are feared and to whom sacrifices are made; the latter exclusively consisting of fowls. The sacrificial altar is the fire-hearth. The Asurs have no priests, the

¹ These totems do not appear to be taboo to the members of its Sept, the only trace of such a thing is to be found in the restriction of intermarriage within the same totemistic Sept; but even here I was told by some men of the Bes'erā section, that they could not help intermarrying, since other sections were living too far away from their homes.

head of each family performs the required religious rites.² Every departed parent becomes a spirit and everybody who dies an unnatural death turns into a malignant one. After the death of a member of the household the regular meals are placed in his name outside the home near the door for eight days, after which the nearest relatives and friends come for the funeral meal at which they partake freely of "jhaṛi," Rice-beer, which they brew themselves. The Asurs burn their dead and put some rice on the funeral pile for the journey of the deceased beyond. They do not pick up any relics to keep or put by as other aborigines do. If sickness or any calamity visits the house of the Asur he is sure that some way or other a deceased parent has been disturbed, who must be quieted in the manner described above. The most peculiar feature, however, in the belief of the Asurs is the idea that ancestors or the spirits of the dead are re-born in their children.

The marriage ceremony is very simple, no priestly functions are required. Polygamy is permitted and so is the re-marriage of widows. The price of a bride varies from three to five rupees. Child marriages are unknown to the Asurs. Marriages within the totemistic section is not entirely prohibited, otherwise the common restriction is observed:—"Chachērā, mamērā, phuphērā, musērā." The Asurs do not tattoo and ornaments are worn very sparingly. The Baby gets some anklets of iron to protect him from the evil eye of some person outside the tribe; within there are no witches or persons with evil eye. The Asurs are a stern race, have no musical instruments and seldom sing or dance. Rice-beer is indulged in by both sexes, but only men smoke. They are not very particular about their food and eat almost everything, even the flesh of the carcase of a cow.

I have tried almost in vain to find out any traditions or legends the Asurs might possess; all I could gather is, that they have a remnant of the Asur-legend so well known among the Mundāris and Urāons.

There can be no doubt but that Asurs are the subject of this tradition, according to which they were destroyed by Siyboṇā, who ruled that their spirits should be worshipped. The meaning of this tradition is apparently the following:—

The Asurs were the first settlers in the country, which is now called Chōṭā Nāgpur; they were living then pretty much in the same way as they do now, viz, chiefly by iron smelting and a little husbandry. It may be that a section of them had acquired some civilization

² When they are found to practise demonworship, it is only in aid to the deity of the village in the precincts of which they live. In these cases the baigā or priest of the respective community (Korwā or Urāon) is making the sacrifice.

and that those remnants of copper mines, found in some localities of Chōṭā Nāgpur owe their origin to this advanced section of the Asurs. The Muṇḍāris entered Chōṭā Nāgpur after them, coming from the West, leaving the Korkus in the Ellichpur District and other Kolarian tribes in other parts of the Central Provinces. Doubtless a fierce struggle between the new comers and the original settlers ensued, in which the Asurs, perhaps in a bloody battle were almost annihilated, the surviving remnant being driven to the hills, where we find them even now; however the spirits of the slain haunted the victors who being horrified by the tremendous slaughter they had committed among their enemies, for ever feared that these spirits would take revenge and hence the deifying and worship and propitiation of them by means of sacrifices on the part of the conquerors. The Asurs have most probably adopted the language of the latter, the Muṇḍāris, retaining only part of their original "duk mā" and making such alterations in the pronunciation of the language of their conquerors, as suited them best. By and bye they added also Dravidian words to their vocabulary and still later on some Hindī words and thus was made up the present Asur Du mā, of which on the following pages a grammatical outline is given.

INDEX.

CHAPTER I : *On transliteration.*

	Page.
1. Vowels	153
2. Hiatus and consonants	ib.

CHAPTER II : *Nouns.*

3. Gender and number	ib.
4. Case and signs	154
5. „ examples... ..	ib.
6. Declination	155

CHAPTER III : *Adjectives.*

7. General remarks on adjectives	156
8. Comparison of „	ib.

CHAPTER IV : *Pronouns.*

9. Personal pronoun	ib.
10. Declination of the first person	157
11. „ „ second „	ib.
12. Demonstrative pronouns	158
13. Declination of demonstrative pronouns	ib.
14. Examples of the use of pronouns	ib.

	Page.
15. Relative pronouns	159
16. Interrogative „	ib.
17. Indefinite „	ib.
18. List of names of relatives	160

CHAPTER V : *On the Verb.*

19. On tense and characteristics	ib.
20. Participles	161
21. Infinitive and conditional	ib.
22. On the passive voice	ib.
23. General remarks on the verb	ib.
24. Conjugation of <i>rāta'ā</i> : to beat. Present tense : I beat or I am beating	162
25. Imperfect tense : I beat or I was beating	ib.
26. Perfect tense : I have beaten	ib.
27. Future tense : I shall or will beat	163
28. Conjugation of the Conditional	ib.
29. „ „ Passive	ib.
30. The potential	164
31. Imperative	ib.

CHAPTER VI : *Negatives, Compounds, Causals, etc.*

32. Verbs with the negative	ib.
33. Examples of verbs combined with negatives	165
34. Agreement of the verb with its object	ib.
35. Compound verbs	ib.
36. Causal verbs	166
37. Defective „	ib.
38. The verb <i>Konoā</i> = not to be	167

CHAPTER VII : *Adverbs.*

39. Adverbs of time	ib.
40. „ „ place and manner... ..	ib.
41. „ „ affirmation and negation	168
42. Elliptical sentences	ib.

CHAPTER VIII : *Numerals, Postpositions, Conjunct. and Interject.*

43. Numerals (cardinals)	ib.
44. Ordinals	ib.
45. Postpositions	169
46. Conjunctions and interjections	ib.

CHAPTER IX : *Asur, a Kolarian Dialect.*

47. Similarity with Munḍārī	ib.
48. Differences „ „	170
49. Dravidian words in the Asur dukmā	171
50. Genuine Asur words ?	ib.

CHAPTER I. TRANSLITERATION.

1. *Vowels.*

Short *a* and long *ā* like the final *a* in the word *America* and the *a* in *father*, respectively :—

- e* short like the *e* in the English word *glen* ;
- ē* long, as the *a* in *rate* ;
- i* and *ī* as *i*, in *bit* and *ee*, in *tree* respectively ;
- o* short like the *o* in *short* ;
- ō* long as in *both* ;
- ó* a sound similar to the *oa* in *broad* ;
- u* short and long *ū* as in *full* and *flute* respectively ;
- au* diphthong like *ou* in *house* ;
- ai* resembling the *i* in *light*.

2. *Hiatus and Consonants.*

The check which often occurs after a vowel and especially when two vowels stand together, is represented by an apostrophe ('). The semivowels *y* and *v* are frequently employed in connection with short vowels for the sake of euphony.

Little is to be said with regard to consonants, since they are the same as in the Hindī alphabet, with which the reader is supposed to be familiar; the guttural nasal *n* is represented by *ṇ*, ruled *n=ṇ*. The nasal *n* in connection with the guttural *g* is represented by *ṅ*. The palatials *d* and *t* are written *ḍ* and *ṭ* and the cerebral *r=r*, *c* is pronounced like *ch* in *church* *ch* is its aspirated form.

CHAPTER II. NOUNS.

3. *Gender and Number.*

The *Asur dukmā* does not distinguish between gender. Whenever it is desired to distinguish sex, the *Asur* adds with regard to children, *kōrā* and *kūrī* to *hopon*, respectively, thus *kōrā hopon*, means a male child, and *kūrī hopon*, a female child. For irrational beings he makes use of the word *saṇḍi* and *egā* ; e.g., *kūl*=tiger, *kūl saṇḍi*=male tiger ; *kūl egā*=tigress.

Asur has three numbers, the Singular, the Dual, and the Plural. The formation of the latter two is quite easy ; for the Dual simply adds *kiṅ* and the Plural *kū* ; thus :—

hor, a man ;
hor kiṅ, two men ;
hor kū, men ;
īpil, a star ;
īpil kiṅ, two stars ;
īpil kū, stars ;

haḍḍā, an ox ;
haḍḍā kiṅ, two oxen ;
haḍḍā kū, oxen ;
ḍirī, a stone ;
ḍirī kiṅ, two stones ;
ḍirī kū, stones ;

4. *Cases.*

The Nominative, Accusative and Dative have no case signs and are therefore alike; when however in the Dative direction is implied it takes the sign of the Ablative case *tē*. The sign of the genitive is *ā* and *rā* and that of the corresponding possessive *ren* and *renī*.

The Locative sign is *rē*, the vocative is identical with the nominative and is preceded by the interjection *oe*; therefore

Nominative	}	are the same.
Accusative		
Vocative		
Dative	}	<i>tē</i> .
Dative, II form		
Ablative		
Genit. <i>ā</i> , <i>rā</i> .		
Possess. <i>ren</i> , <i>renī</i> .		
Loc. <i>rē</i> .		

5. *Case examples.*

Nominative, Accusative, and Dative :

nā dīrī idanā, this is a stone.

minā dīrī aguimē, bring that stone.

horķū vedkanā, the men have come.

horķū alopē rūpē, don't beat the men.

kūl miad haḍḍā habliidiāe, the tiger has seized an ox.

Asur horķu ōt kākū kameā, the Asurs do not cultivate the field, *hukū merhed kameā*, they work iron.

Sadom idimē, take away the horse.

sadom bir ovaiemē, give grass to the horse.

Dative and Ablative :

Jū, hunī tē senōmē! Go up to him.

Jū, amā vatu te senōmē Go to your village.

iḡ oṛā tē rūar tanāiḡ I am returning home.

Ablative and Instrumental :

Am okoātē vejulenā? Where do you come from?

Banaī banaī horķū raḡet tē gojoyanā. Many people died from starvation.

Honā vatu tē iḡ vedlenā. I came from that village.

miniētē paisā rejemē! Take away the money from him!

Genitive and Possessive :

iḡā ōrā, my house; *aleā oṛā*, our house.

amā nyumū citanā, what's your name?

hinirā gendrā aguime, bring his cloth.

sadom rā caulom, the tail of the horse.

sūtam rā būver, a rope of cotton.

merhed rā kaṭu, a sword of iron.

neā disum ren rājā, the king of this country.

neā oṛā rēnī hoṛkū, the men of this house.

boyoy rēnī hopon, this is my younger uncle's son.

Asur rēnī Baiḡā kuniā, the Asurs have no priests, *lit.* of the

Asurs no priest is.

Locative :

oṛā re, in the house

okoārē dōhōtanā ? Where (in what) do you stay ?

minī rē dārī konoā, he has no strength (in him).

Burū rā usul rē, on the top of the hill.

otē latar rē, underneath the earth.

6. Declination of the noun.

hopon, child.

Singular.

Nom. <i>hopon</i>	the child.
Gen. <i>hopon rā</i> or <i>hopon ren, renī</i>	of the child.
Dat. <i>hopon</i> or <i>hopon tē</i>	to the child.
Acc. <i>hopon</i>	the child.
Abl. <i>hopon tē</i>	from or by the child.
Loc. <i>hopon rē</i>	in or on the child.
Voc. <i>oē hopon</i>	oh child.

Dual.

Nom. <i>hoponkiḡ</i>	the two children.
Gen. <i>hoponkiḡ rā</i> or <i>ren, renī</i>	of the two children.
Dat. <i>hoponkiḡ</i> or <i>tē</i>	to the two children.
Acc. <i>hoponkiḡ</i>	the two children.
Abl. <i>hoponkiḡ tē</i>	from or by the two children.
Loc. <i>hoponkiḡ rē</i>	in or on the two children.
Voc. <i>oē hoponkiḡ</i>	oh ye two children !

Plural.

Nom. <i>hoponkū</i>	the children.
Gen. <i>hoponkū rā</i> or <i>ren</i>	of the children.
Dat. <i>hoponkū</i> or <i>tē</i>	to the children.
Acc. <i>hoponkū</i>	the children.
Abl. <i>hoponkū tē</i>	from or by the children.
Loc. <i>hoponkū rē</i>	in or on the children.
Voc. <i>oē hoponkū</i>	oh children.

CHAPTER III. ADJECTIVES.

7. General remarks on adjectives.

Adjectives are subject to no change whatever, they are in reality nouns and are therefore declinable.

hinī buggī hoṛ idanā, he is a good man.

nihi sadom hetkan idanā, this horse is bad.

nihi maṇḍī sibil koneā, this meal is not savoury.

Asur hoṛku hudiṅ idanāḱū, the Asurs are a small people.

Ranchi rē banā Gomkeḱū idanāḱū, at Ranchi there are many Sahebs.

Usul burū, the high mountain.

Adjectives are formed from nouns by adding the past participle ending of the verb, e.g., *napā*, health, *napākan*, healthy. Verbal adjectives are formed in the same way; example: *rūvā*, to be beaten, *rūvākan*, beaten; *huni napākan hoṛ idanā*, he is a healthy man. *Hukū rūvākan mudaikū idanāḱū*, they are beaten enemies.

8. Comparison of adjectives.

The degrees of comparison are expressed in the same manner, we find in Hindī and the Kolarian languages, viz., the word compared stands in the nominative and the word with which it is to be compared, is placed in the Ablative case, thus:—

Iṅā ōṛā amā ōṛā tē baḍeā, my house is larger than your's.

Sadom tē hāthi dāriā, the elephant is stronger than the horse.

Iṅā seḡot sanamkū tē usulūi, my daughter is the tallest (taller than all).

CHAPTER IV. PRONOUNS.

9. Personal pronouns.

Singular.	Dual.	Plural.
1. <i>Iṅ</i> , I.	<i>aliṅ</i> , we two.	<i>alē</i> , we.
2. <i>am</i> , thou.	<i>alūṅ</i> , I and you two. <i>aban</i> , you two. <i>akiṅ</i> , they two.	<i>abū</i> , we and you. <i>apē</i> , you.

From the above it will be seen that in the Dual and the Plural there are two forms of the second person, the first excluding and the second including the speaker. On the other hand the third person is wanting and the demonstrative pronoun is used instead.

10. *Declination of the first person singular.*

Nom. <i>īḡ</i>	I.
Gen. <i>īḡā</i> or <i>īḡrenī</i>	of me, my, mine.
Dat. <i>īḡ</i> or <i>īḡ etē</i>	to me.
Acc. <i>īḡ</i>	me.
Abl. <i>īḡ tē</i> or <i>īḡ etē</i>	from or by me.
Loc. <i>īḡ rē</i>	in me.

Dual, first person.

Nom. <i>alīḡ</i>	we two.
<i>alalḡ</i>	I and you two.
Gen. <i>alīḡā</i> or <i>rā, renī</i>	of us two, our.
<i>alalḡā</i> or <i>rā, renī</i>	of me and you two.
Dat. <i>alīḡ</i> or <i>alīḡ tē</i>	to us two.
<i>alalḡ</i> or <i>alalḡ tē</i>	to me and you two.
Acc. <i>alīḡ</i>	us two.
<i>alalḡ</i>	me and you two.
Abl. <i>alīḡ tē</i>	from us two.
<i>alalḡ tē</i>	from me and you two.
Loc. <i>alīḡ rē</i>	in us two.
<i>alalḡ rē</i>	in me and you two.

Plural, first person.

Nom. <i>Alē</i>	we.
<i>abū</i>	we all, addressees included
Gen. <i>alēā</i> or <i>rā</i> or <i>renī</i>	of us, our.
<i>abūā</i> or <i>rā</i> or <i>renī</i>	of us all, our do.
Dat. <i>alē</i> or <i>tē</i>	to us.
<i>abū</i> or <i>tē</i>	to us all do.
Acc. <i>alē</i>	us.
<i>abū</i>	us all do.
Abl. <i>alē tē</i>	from us.
<i>abū tē</i>	from us all do.
Loc. <i>alē rē</i>	in us.
<i>abū rē</i>	in us all do.

11. *Second person singular.*

Nom. <i>am</i>	thou.
Gen. <i>amā</i> or <i>amrā</i> or <i>amrenī</i>	of thee, thy, thine.
Dat. <i>amā</i> or <i>amātē</i>	to thee.
Acc. <i>am</i>	thee.
Abl. <i>amā tē</i> or <i>amāetē</i>	from or by thee.
Loc. <i>amā rē</i>	in thee.
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Dual, second person.

Nom. <i>aban</i>	you two.
Gen. <i>abanā, abanrā, reni</i>	of you two.
Dat. <i>aban, aban tē</i>	to you two.
Acc. <i>aban</i>	you two.
Abl. <i>aban tē</i>	from you two.
Loc. <i>abran rē</i>	in you two.

Plural, second person.

Nom. <i>apē</i>	you.
Gen. <i>apēā, rā, reni</i>	of you.
Dat. <i>apē</i> or <i>apēālē</i>	to you.
Acc. <i>apē</i>	you.
Abl. <i>apēatē</i>	from you.
Loc. <i>apē rē</i>	in you.

12. *Demonstrative pronouns.*

Proximate: *hini*, this, he, she, it; also *mini*.

remote: *huni*, that, he, she, it; also *munī*.

proximate: *nihī, nia, nea, minā*, this, it.

They are used both for rational and irrational beings.

Proximate: *hikū, nikū*, these; *hikiṭṭ*, these two.

remote: *hukū, nukū*, those; *hukiṭṭ*, those two.

13. *Declination of the demonstrative pronoun.*

Gen. <i>hiniā, rā, reni</i>	of him, his, her, of this;
„ <i>huniā, rā, reni</i>	of him, his, her, of that;
„ <i>nihā, neā, nerā, nihereni</i>	of this, of that;
„ <i>hikūā, rā, rēni</i>	of these, of them, their;
„ <i>hukūā, rā, reni</i>	of those, of them, their;
„ <i>hikiṭṭā, rā, reni</i>	of these two, their;
„ <i>hukiṭṭā, rā, reni</i>	of those two, their;
Acc. and Dat. <i>hini tē</i> , etc.	to him, from him;
Loc. <i>huni rē</i>	in him.

14. *Examples on the use of pronouns.*

iṭṭā aḍḍē vejumē, come to me (my place come);

amā ōrā okoā rē? Where is thy house?

hiniā sētā aguimē, bring his dog;

nihā sadom okoerā idanā? To whom belongs this horse?

nihī hoṛ ovaimē, give to this man;

huni Asur kunā, he is no Asur;

mini dukmā kāē tuanā, he can't speak the language;

minā citan vatu? Which village is this?

hikūrā sadom nyelēmā, look after their horse.

hukurā meromkū kūl hablidiaē, their goats were destroyed by the tiger.

nukiṣ hor renī kūri horkiṣ okoā rē, where are the wives of those two men ?

15. *Relative pronouns.*

There appear to be no relative pronouns. The Asur simply relates the facts as they occurred and does not care to combine them in any way ; thus the sentence : The man died who came yesterday, he will simply render by relating first that the man came and then that he died : *Hor vedyanā huni godyonā*, *lit.* man came, that died.

16. *Interrogative pronouns.*

These are *okoe* who, which, what ;

oko which, what ;

citan which, what ; also *okin*, how.

The declination is regular :

okoe rā, renī ; okoe tī ; okoe re ;

okoe vedlenā, who came ?

okoe tē vejuyanā, where did you come from ?

okoe nyelkedā, who saw it ?

am citan koeyanā, what do you want ?

These pronouns are used also of course as ploniminal adjectives, in which case they retain their form : *okoe kūri vejuyanā* ? What woman was coming ? *Huni oko orā rē dohótanā* ? In which house is he staying ? *Okin saṣiṣā* ? How far will it be ?

When the question is put to somebody, whether he should like to do such and such a thing, *ci kā* is generally added to the question ; e.g., Will you buy this ? *Niā tilaiyā ci kā* ? Is there water and fuel at your village ? *Amā yatū rē da'a idanā ci kā* ? *ci kā* meaning "or not." Where we however would use in a sentence "or not" it is expressed in Asur by *ci konā* or *kuniā*, e.g., Will you obey my order or not ? *Iṣā dukmā sāriyā ci konā* ? Do you know (can you speak) Hindi or not ? *Am Sadān dukmā dāriā ci konā* ?

17. *Indefinite pronouns.*

For the indefinite pronouns "anyone" and "anything" the demonstrative pronouns *okoe* and *okō* are used, besides *okō* for "any" and "some" :

Orā rē okoe idanā ? Is there anybody at home ?

Okā hetā hejomē, come at any time.

Okā okā helā kūl hejuā, sometimes the tiger comes.

"Something" and "anything" is also expressed by *citan* :

Amā citanā idanā ? Have you anything ? (*lit.* of thee, thine anything is) ?

18. *List of names of relatives.*

There is also in Asur the curious method of combining the *pronomen possessivum* with the names of parents, children and relatives in general. As the Asur *dukma* is rather rich in these names, a list of the principal is given below :—

<i>Iṇā āpuṇ</i>	my father.
„ <i>hālāṇ</i>	„ grand-father.
„ <i>huniṇ</i>	„ elder brother.
„ <i>duṇ</i>	„ elder sister.
„ <i>gungumiṇ</i>	„ father's brother.
„ <i>hāloniṇ</i>	„ father's sister.
„ <i>hoponiṇ</i>	„ son.
„ <i>huḍiṇ</i>	„ grand-son.
„ <i>teḡamiṇ</i>	„ son-in-law.
„ <i>huhṇ</i>	„ brother-in-law.
„ <i>eḡāiṇ</i>	„ mother.
„ <i>jāṇ</i>	„ grand-mother.
„ <i>boyon</i>	„ younger brother.
„ <i>bokkōniṇ</i>	„ younger sister.
„ <i>hiliṇ</i>	„ mother's brother.
„ <i>daimiṇ</i>	„ mother's sister.
„ <i>teḡoliṇ</i>	„ daughter.
„ <i>katiṇ</i>	„ grand-daughter.
„ <i>kūriṇ</i>	„ daughter-in-law.
„ <i>iṇadiṇ</i>	„ sister-in-law.

CHAPTER V. ON THE VERB.

19. *On tense characteristics.*

The Asur *dukma* has strictly speaking only 4 tenses : the present, the imperfect, the past or perfect, and the future.

The present tense active and neuter voice add *tanā* or *ā* to the root : *nyeltanā*, I am seeing ; *druptanā*, I am sitting ; *īdan-ā* (*īdanā*), I am being ; and *yanā* and *tadā* for the indefinite : *botoyanā*, it is hot ; *rabay yanā*, it is cold ; *sentadā*, I go ; *jomtadā*, I eat.

The imperfect of transitive verbs adds to the root *lidiā*, *lidiā*, *lā* ; that of intransitive verbs adds *lenā* and *yanā* : *senlenā*, I was going ; *dohólenā*, I was remaining ; *dukmalidiā*, was speaking ; *ovāldiā*, was giving.

The perfect adds to the root the following tense characteristics : *ā, kedā, ked, ledā, ya, yanā, kan, kanā* : *jomkedā*, I have eaten ; *vejukanā*, I have come ; *senyanā*, have gone ; *duk māyanā*, have been called.

The future adds *eā, eyā* or *yā* and in some words *nā* : *seneā*, I shall go ; *duk māyā*, shall speak ; *ragēyā*, shall call ; *rūēā*, shall beat.

With regard to the future tense it must be observed, that the Asur will never employ the present, as is done in English, when in reality the future is meant ; for example "Can you do this ?" or "Do you know this ?" must be rendered by using the future tense : *Nihi kameyā ? Nihi tuanā ?* "I go home this year." *Neā mēs rē ōrā tē senōain, lit.* this year in house to I will go.

20. On participles.

The adverbial participle adds *rē* to the root of the verb : *nyūe rē godyanā*, he died drinking, in the act of drinking.

In the present participle the stem is repeated and then *tē* is added : *jomjomtē*, eating ; *nyel nyel tē*, seeing.

The past perfect participle adds *kan* and *tē* to the root : *jomkante*, having eaten ; also *len*, e.g., *senlen tē jomeā*, having gone, I will eat ; *vejkantē*, having come.

The conjunctive participle adds *ked tē* and *tē* to the root of the verb : *jomked tē* after having eaten ; *nyeltē*, after having seen.

21. On the infinitive and conditional.

The infinitive adds *ta'ā* to the root of the verb : *nyuta'ā*, to drink ; *drupla'ā*, to sit ; *nyelta'ā*, to see ; *jomtu'ā*, to eat.

The conditional adds *rē* together with the particle *dō* which is similar to the Hindi "tū," e.g., *iṅā sen rēdō bēseyā*, if I go, it will be well ; *huni vejā rēdō nelēyā*, if he had come, he would have seen ; *iṅ rūrēdō*, if I beat ; *bugē lekā tē kāmē rē dō-amā pairā yameā*, if you work well, you will receive money ; *tē* also is used for the conditional, e.g., *amā tuāetē iṅ rageyā*, if I knew thee, I would have called thee *lit.* from knowing thee I shall call thee.

22. On the passive voice.

Little is to be said with regard to the passive voice. For the present tense *oā* or *vā* is added to the root : *rūvātānā*, I am beaten. In the past tense it is *rūvāyanā*, I was beaten ; and in the future *vā* or *goā* is simply added to the root instead of *eā* in the active and neuter verb : *rūgoā*, I shall be beaten.

23. General remarks.

The noun of agency is formed by adding *ae* to the root, which is repeated : *jojomae*, eater ; *rūrūae*, beater. Nouns are formed from

the verb by dropping the ending of the infinitive: *dukmā'tā*, to speak; *dukṃā*, speech; *jōjom*, food, from *jōmtā'tā*, to eat is an exception.

In conjugation the pronominal termination of the subject is added to the inflectional ending of the verb, but this principle is not so universally applied in the Asur Dukmā as for example in the Mundari language.

24. *Conjugation of the verb: rūta'a, to beat.*

Present tense: I beat or I am beating.

Sing. 1.	<i>iṅ rūtanā</i> or <i>rūtanaṅ</i>	I am beating.
2.	<i>am rūtanā</i> or <i>rūtanam</i>	thou art beating.
3.	<i>hunī rūtanā</i> or <i>rūtanaē</i>	he, she, it is beating.
Dual. 1.	<i>aliṅ rūtanā</i> or <i>rūtanaṅliṅ</i>	we two are beating.
1+2.	<i>abaṅ rūtanā</i> or <i>rūtanaṅlaṅ</i>	I and you two are beating.
2.	<i>aban rūtanā</i> or <i>rūtanaṅban</i>	you two are beating.
3.	<i>akiṅ rūtanā</i> or <i>rūtanaṅkiṅ</i>	they two are beating.
Plur. 1.	<i>alē rūtanā</i> or <i>rūtanaṅlē</i>	we are beating.
1+2.	<i>abū rūtanā</i> or <i>rūtanaṅbū</i>	we and you are beating.
2.	<i>apē rūtanā</i> or <i>rūtanaṅpē</i>	you are beating.
3.	<i>hukū rūtanā</i> or <i>rūtanaṅkū</i>	they are beating.

25. *Imperfect tense: I beat or was beating.*

Sing. 1.	<i>iṅ rūlidiā</i> or <i>rūlidiāṅ</i>	I was beating.
2.	<i>am rūlidiā</i> or <i>rūlidiām</i>	thou wast beating.
3.	<i>hunī rūlidiā</i> or <i>rūlidiāē</i>	he was beating.
Dual. 1.	<i>aliṅ rūlidiā</i> or <i>rūlidiāṅliṅ</i>	we two were beating.
1+2.	<i>alaṅ rūlidiā</i> or <i>rūlidiāṅlaṅ</i>	I and you two were beating.
2.	<i>aban rūlidiā</i> or <i>rūlidiāṅban</i>	you two were beating.
3.	<i>akiṅ rūlidiā</i> or <i>rūlidiāṅkiṅ</i>	they two were beating.
Plur. 1.	<i>alē rūlidiā</i> or <i>rūlidiāṅlē</i>	we were beating.
1+2.	<i>abū rūlidiā</i> or <i>rūlidiāṅbū</i>	we and you were beating.
2.	<i>apē rūlidiā</i> or <i>rūlidiāṅpē</i>	you were beating.
3.	<i>hukū rūlidiā</i> or <i>rūlidiāṅkū</i>	they were beating.

The imperfect may be formed also with the auxiliary *dohótavā*, *iṅ rū dohókedaiṅ*, etc.

26. *Perfect tense: I have beaten.*

Sing. 1.	<i>iṅ rūkedā</i> or <i>rūkedāṅ</i>	I have beaten.
2.	<i>am rūkedā</i> or <i>rūkedām</i>	thou hast beaten.
3.	<i>hunī rūkedā</i> or <i>rūkedāē</i>	he has beaten.
Dual. 1.	<i>aliṅ rūkedā</i> or <i>rūkedāṅliṅ</i>	we two have beaten.
1+2.	<i>alaṅ rūkedā</i> or <i>rūkedāṅlaṅ</i>	I and you two have beaten.
2.	<i>aban rūkedā</i> or <i>rūkedāṅban</i>	you two have beaten.
3.	<i>akiṅ rūkedā</i> or <i>rūkedāṅkiṅ</i>	they two have beaten.

Plur. 1.	<i>alē rūkedā</i> or <i>rūkedālē</i>	we have beaten.
1+2.	<i>abū rūkedā</i> or <i>rūkedābū</i>	we and you have beaten.
2.	<i>apē rūkedā</i> or <i>rūkedāpē</i>	you have beaten.
3.	<i>hukū rūkedā</i> or <i>rūkedākū</i>	they have beaten.

27. *Future tense: I shall beat.*

Sing. 1.	<i>iṅ rūeyā</i> or <i>rūeyāiṅ</i>	I shall beat.
2.	<i>am rūeyā</i> or <i>rūeyām</i>	thou wilt beat.
3.	<i>hunī rūeyā</i> or <i>rūeyāe</i>	he will beat.
Dual. 1.	<i>aliṅ rūeyā</i> or <i>rūeyāliṅ</i>	we two shall beat.
1+2.	<i>alay rūeyā</i> or <i>rūeyāliṅ</i>	we and you two shall beat.
2.	<i>aban rūeyā</i> or <i>rūeyāban</i>	you two will beat.
3.	<i>akiṅ rūeyā</i> or <i>rūeyākiṅ</i>	they two will beat.
Plur. 1.	<i>alē rūeyā</i> or <i>rūeyālē</i>	we shall beat.
1+2.	<i>abū rūeyā</i> or <i>rūeyābū</i>	we and you shall beat.
2.	<i>apē rūeyā</i> or <i>rūeyāpē</i>	you will beat.
3.	<i>hukū rūeyā</i> or <i>rūeyākū</i>	they will beat.

The past future is formed with the help of the auxiliary *cabta'a*:
iṅ rūcabe'aiṅ, I shall or will have beaten.

28. *Conjugation of the conditional.*

Sing. 1.	<i>iṅ rūrēdō</i> or <i>rūrēdōiṅ</i>	if I beat.
2.	<i>am rūrēdō</i> or <i>rūrēdōam</i>	if thou beat.
3.	<i>hunī rūrēdō</i> or <i>rūrēdōāe</i>	if he beat.
Dual. 1.	<i>aliṅ rūrēdō</i> or <i>rūrēdōaliṅ</i>	if we two beat.
2.	<i>aban rūrēdō</i> or <i>rūrēdōaban</i>	if you two beat.
3.	<i>akiṅ rūrēdō</i> or <i>rūrēdōakiṅ</i>	if they two beat.
Plur. 1.	<i>alē rūrēdō</i> or <i>rūrēdōalē</i>	if we beat.
2.	<i>apē rūrēdō</i> or <i>rūrēdōapē</i>	if you beat.
3.	<i>hukū rūrēdō</i> or <i>rūrēdōkū</i>	if they beat.

29. *Conjugation of Passive present: I am beaten or being beaten.*

<i>iṅ rūvātānā</i> or <i>rūvātānāiṅ</i>	I am beaten.
<i>am rūvātānā</i> or <i>rūvātānām</i>	thou art beaten.
<i>hunī rūvātānā</i> or <i>rūvātānāe</i>	he is beaten.
<i>alē rūvātānā</i> or <i>rūvātānālē</i>	we are beaten, etc.

Past: I was beaten.

<i>iṅ rūvāyanā</i> or <i>rūvāyanāiṅ</i>	I was beaten.
<i>am rūvāyanā</i> or <i>rūvāyanām</i>	thou wast beaten.
<i>aliṅ rūvāyanā</i> or <i>rūvāyanāliṅ</i>	we two were beaten.
<i>alē rūvāyanā</i> or <i>rūvāyanālē</i>	we were beaten.
<i>hukū rūvāyanā</i> or <i>rūvāyanākū</i>	they were beaten.

Future: I shall be beaten.

<i>iṅ rūgoā</i> or <i>rūgoāiṅ</i>	I shall be beaten.
<i>aliṅ rūgoā</i> or <i>rūgoāliṅ</i>	we two shall be beaten.
<i>alē rūgoā</i> or <i>rūgoālē</i>	we shall be beaten.

30. *The potential.*

For the potential mood *kā* is added to the modified stem of the verb.

Sing.	<i>iṅ rūēkā</i> or <i>rāēkāiṅ</i>	I may beat.
	<i>am rūēkā</i> or <i>rūēkāṃ</i>	thou mayst beat.
	<i>huni rūēkā</i> or <i>rūēkāē</i>	he may beat.
Dual.	<i>aliṅ rūēkā</i> or <i>rūēkāliṅ</i>	we two may beat.
	<i>aban rūēkā</i> or <i>rūēkāban</i>	you two may beat.
	<i>akiṅ rūēkā</i> or <i>rūēkākiṅ</i>	they two may beat.
Plur.	<i>alē rūēkā</i> or <i>rūēkālē</i>	we may beat.
	<i>apē rūēkā</i> or <i>rūēkāpē</i>	you may beat.
	<i>hukū rūēkā</i> or <i>rūēkākū</i>	they may beat.

The verb *tuainā*, "knowing" is frequently used in the sense of a potential; e.g.,

<i>iṅ seneā tuainā</i>	I will be able to go ;
<i>iṅ kaṅ seneā tuainā</i>	I will be unable to go.
<i>Huni dukmā kē tuainā</i>	he cannot speak Asur.

It is used also as a permissive :

iṅ jīb jom tuainā, I can, *i.e.*, I am permitted to eat meat.

31. *The Imperative.*

The imperative is the same as in Muṇḍārī, with this difference that for the sake of euphony the imperative endings *mē* and *pē* and *kā* are often preceded by the vowel *e*.

Sing.	2. <i>rūēmē</i>	beat thou or <i>am rūēmē</i> .
	3. <i>rūēkāē</i>	may he beat.
Dual.	2. <i>rūēban</i>	you two beat.
	3. <i>rūēkākiṅ</i>	may they two beat.
Plur.	2. <i>rūēpē</i> or <i>apē rūēpē</i>	you beat.
	3. <i>rūēkākū</i>	may they beat.

CHAPTER VII. NEGATIVES, COMPOUNDS, CAUSALS, ETC.

32. *Verbs with the negative.*

There are in the Asur dukmā three negatives which can be connected with any verb, *viz.*, *kā*, not ; *alōkā*, may not and *alō*, do not.

<i>kāiṅ rūēāiṅ</i> or <i>iṅ kā rūēāiṅ</i>	I will not beat.
<i>kām rūēām</i> or <i>am kā rūēam</i>	thou will not beat.
<i>kāē rūēāē</i> or <i>huni kā rūēāē</i>	he will not beat.

Alōkaiṅ rūṣaiṅ or rūṣgō

I may not beat.

alōkam rūṣam or rūṣgō

thou mayst not beat.

alōkāe rūṣāe or rūṣgō

he may not beat.

alom rūṣmē

do not beat, (thou).

alōpē rūṣpē

do not beat, (you).

kā is often employed in the sense of "not" in connection with adjectives; e.g., *kā parilā*, not good, i.e., bad, *kā* answers therefore our usual negative prefix *un*.

33. Examples of verbs combined with negatives.

iṅ kāiṅ jomtānāiṅ

I do not eat.

am kām jomtanām

thou dost not eat.

apē kūpē jomtanāpē

you do not eat.

iṅ kāiṅ senā

I will not go.

āle kāle senā

they will not go.

āpe kāpe senū

you will not go.

alōkaiṅ senā

I may not go.

alōkākū senā

they may not go.

alom jommē

do not eat.

alōkāhū jomeā

do not let them eat.

alōkāe vejā

do not let him come.

alom senōāe

do not let go.

34. Agreement of the verb with its object.

The curious peculiarity of making the active verb to agree with its object, found in the Kolarian languages, is also met with in Asur; for example:

hunī kulkiṅāe

he sent me.

hunī kulkedmeāe

he sent thee.

hunī kulkedīā

he sent him.

iṅā alom rūiṅmē

do not beat me.

hunī alom rūiemē

do not beat him.

aiṅ rūkiṅ pē

beat them (two).

hunī kulkedkūāe

he sent them.

ovāiṅmē

give me.

ovālemē

give us.

duk māetanāiṅ

I am saying to him.

hunī dukmākūtānāe

he says to them.

35. Compound verbs.

Compound verbs are frequently used in the Asur dukmā; a noun being followed by the verb *dohōtēā*, to be, to remain; e.g.:

*iṅ hāsu dohōtanā*I am ill; *lit.* I pain remain*hunī hāsu dohōtanāe*

he is ill.

<i>iṅ hāsu dohólenā</i> or <i>dohólenaiṅ</i>	I was ill.
<i>am hāsu dohólenā</i> or <i>dohólenam</i>	thou wast ill.
<i>alē hāsu dohókedaḷē</i>	we were ill.
<i>hukū hasu dohókedūkū</i>	they were ill.
<i>raṇet', hunger: raṇet'yanaiṅ</i>	I was hungry, poor; <i>lit.</i> I hunger was.
<i>rabāṅ, cold: rabāṅtanā</i>	it is cold.
<i>lōlō, hot or heat, lōlō tanaṅ</i>	I feel hot.
<i>iṅ raṇet dohóeyaiṅ</i>	I shall be hungry.

There are many verbs combined with the word *rúar*, back; which is conjugated regularly.

Sen <i>rūaryanaṅ</i>	I returned.
<i>apē sen ruarpē</i>	come ye back, return.
<i>hukū dukmā rūarkedākū</i>	they replied, answered.

36. Causal verbs

are formed by the insertion of the particle *gē* between the root of the verb and its termination; example:

<i>iṅ druptunāṅ</i>	I am sitting.
<i>iṅ drupgētanaṅ</i>	I make to sit.
<i>nyuemē, drink! nyūyegēmē</i>	make to drink!
<i>jommē, eat! jomgēmē</i>	feed!
<i>nirēmē, run! niregēmē</i>	cause to run!

Causals of course are formed also by different words:

hukāyēme, hide; intr. *horogēme*, hide; trans. *gitiyēmē*, sleep; intr. *konyonemē*, make to sleep; *raputsā*, to break; intr. *raputendemē*, break; trans. *giyēmē*, cut; trans. *magēmē*, make to cut.

The completive is *cabā*: *Hunī jomcabāyanā*, he has finished eating; *hukū rūcabākedākū*, they have ceased beating.

37. Defective verbs

"*tanā*" is only used as inflectional ending in the verb of the present tense, meaning "to be" "*īdanā*" to be, as a rule is likewise employed only in the present tense sing. and plur. It is often employed where we use the verb to have: *amā aḍḍē paisā īdanā?* have you money? *lit.* is there money with you?

<i>āpē cimin hor īdanā</i>	how many men are you?
<i>amā hoponku īdanā</i>	have you children?

The verb used to make good for the want of the auxiliary verb to be is *dohóta'ā*, to remain; which is used also in the present tense.

<i>iṅ Asur dohótanāiṅ</i>	I am an Asur.
<i>iṅ hāsu dohólenā</i>	I was ill.
<i>iṅ rū dohūkedā</i>	I was beating.

In fact it is with the help of *dohótn'ā* that those tenses may be made up in Asur which otherwise are wanting.

38. The verb : not to be.

The counterpart of *īdanā* is *konoā* and *konā*, not to be: *iṅ Asur kuniā*, I am not an Asur. *Kuniā*, not to be present: *Sāheb kuniā*, the Sahab is not present. *Kuneā*, will not be present. *Amā haḍḍā idanā ci konoā*, have you oxen or not? *Orā rē okoe īdanā ci konoā?* Is there somebody at home or not? *Okoe kuniā*, there is nobody (man) present. *Iṅā aḍ!ṣ paisā konā*, I have no money; *lit.* with me there is no pice.

CHAPTER VIII. ADVERBS.

39. Adverbs of time.

<i>enun</i>	just now.
<i>nahā</i>	now.
<i>nīho</i>	then.
<i>bārkiṅ</i>	now-a-days.
<i>okā helā</i>	sometimes.
<i>tīhiṅ</i>	to-day.
<i>holā</i>	yesterday.
<i>gapā</i>	to-morrow.
<i>musiṅ</i>	one day.
<i>bārsiṅ</i>	two days.
<i>nēs</i>	this year.
<i>hon kalom</i>	last year.
<i>baggā</i>	time.
<i>orte rē</i>	once, one time.
<i>auri</i>	not yet.

40. Adverbs of place and manner.

<i>nenē, nendē</i>	here.
<i>honhon rē</i>	beyond.
<i>nenētē</i>	from here.
<i>hondē</i>	there, thither.
<i>okoārē, okoā tē</i>	where, whither.
<i>hinad rē, himā</i>	near.
<i>saṅiṅ</i>	far.
<i>bekar; kuḍḍhā</i>	very; very much.

<i>nimin, nimin rē</i>	this many, much.
<i>hinā rē</i>	namely.
<i>numun, numun rē</i>	thus.
<i>nūi lekā tē</i>	in this way.
<i>oko lekā tē</i>	somehow, anyhow.
<i>thaukū</i>	well, exactly.
<i>rokē, rokē rokē</i>	quickly.

41. Adverbs of affirmation and negation.

<i>ā</i>	yes.
<i>koan, kuan</i>	no, not.
<i>gē</i>	indeed, certainly.
<i>alō</i>	do not.

42. Elliptical sentences.

Of these the following may be mentioned with the adverbs, *viz.*,
ebā, come here ; *dolā*, come along ; *itū*, who knows.

<i>Citanū ci lekā !</i>	What can be done !
<i>Citan ciliyanā ?</i>	What or how do you do ?
<i>jojom tē</i>	right hand.
<i>lengā tē</i>	left hand.

CHAPTER IX. NUMERALS, POSTPOSITIONS, CONJUNCTIONS AND INTERJECTIONS.

43. A. Numerals (Cardinals).

The Asur can only count up to four.

<i>mīad</i>	one.
<i>bariā</i>	two.
<i>pēā</i>	three.
<i>upun</i>	four,

which are used for all genders : *pēā horkū*, three men ; *pēā haqlā*, three oxen.

For the rest the Asur employs Hindi numerals ; for twenty *kūrī* is used : *mīad kūrī*, one score.

44. B. Ordinals.

The Asur *dukumā* has only three ordinals, *viz.* :

<i>sidā</i>	first.
<i>eīā</i>	second.
<i>mandē</i>	third.

For single *ōṭaṭ* ; for both *bannar* is used.

<i>anām</i>	all.
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45. *Postposition 5.*

<i>maray rē</i>	in front, before.
<i>taiyom rē</i>	after, near.
<i>usul rē</i>	on, above.
<i>latur rē, otē rē</i>	under, underneath.
<i>adde, tūlē (urāon)</i>	with, by, along with.
<i>gati</i>	together, in company.
<i>minā</i>	inside.
<i>talā re</i>	among.

46. *Conjunctions and Interjections.*

<i>gā, egā</i>		for.
<i>kinā gē</i>		therefore.
<i>nihi ra'atē</i>		for this reason.
<i>niā mentē</i>		for that.
<i>hentē</i>		therefore.
<i>enan—mīyan:</i>		when—then.
<i>ci—kā</i>	}:	or—not.
<i>ci—koan</i>		
<i>nīho</i>		then, thereupon.
<i>hed, orō</i>		and.
<i>hed tē</i>		and then, from then, there- upon.
<i>pa'en</i>		but.
<i>hōn</i>		even.

o'e in addressing, oh; *kó* is added in calling or shouting. *Asur rū orā*
rē alom bolē kó, do not enter the house of the Asur. *ju, ju ju!* Go, be
 off! *kó*, hallo! !

CHAPTER X. THE ASUR DUKMĀ A KOLARIAN DIALECT.

47. *Similarity with Mundārī and Santhālī.*

A glance at the preceding pages will convince the student of Kolarian languages that in the Asur Dukmā we have to deal with a Kolarian dialect pure and simple.

The declension of the noun and pronoun, the conjugation of the verb, the dual number, the manner in which the verb is made to agree with the object, the similarity of the pronouns and numerals as well as of the postpositions and conjunctions, all these characterize the Asur Dukmā as a Kolarian Dialect.

Moreover if I were to prove this fact by a Vocabulary, I might simply take out four-fifths of the Mundārī or Santhālī vocabulary. Yet

there are differences between Asur and other Kolarian languages, peculiarities, which it will be worth while to notice.

48. *Differences with Muṇḍārī.*

Wherever a Muṇḍārī word begins with the consonant *h*, the Asur has *v*; e.g.:

Muṇḍārī : <i>hiju</i> ,	Asur : <i>veju</i>	come.
„ <i>hātu</i> ,	„ <i>vātū</i>	village.

The Asur is fond of the *y* before vowels as against the Muṇḍārī :

Muṇḍārī <i>nel</i> ;	Asur <i>nyel</i>	see.
„ <i>nutum</i> ;	„ <i>nyumun</i>	name.
„ <i>nam</i> ;	„ <i>yam</i>	to seek, find.

Other differences may be seen from the following words :—

Muṇḍārī : <i>hon</i> ;	Asur : <i>hopon</i>	child.
„ <i>hoṛā</i> ;	„ <i>hor</i>	man.
„ <i>kulā</i> ;	„ <i>kūl</i>	tiger.
„ <i>dub</i> ;	„ <i>drup</i>	sit.
„ <i>reṇṇē</i> ;	„ <i>rangel</i>	hunger.
„ <i>jilū</i> ;	„ <i>jil</i>	flesh.
„ <i>om</i> ;	„ <i>ovat</i>	give.
„ <i>gitil</i> ;	„ <i>bitil</i>	sand.
„ <i>akō</i> ;	„ <i>hukū</i>	they.
„ <i>ko</i> ;	„ <i>kū</i>	plural ending in arms.
„ <i>eṭkan</i> ;	„ <i>hetkan</i>	bad, evil.
„ <i>nī</i> ;	„ <i>hinī</i>	this (man).
„ <i>neā</i> ;	„ <i>huni</i>	that.
„ <i>ne</i> ;	„ <i>nihī</i>	this.
„ <i>nā</i> ;	„ <i>nahā</i>	now.
„ <i>tisiṇ</i> ;	„ <i>tihṇ</i>	to-day.
„ <i>otē</i> ;	„ <i>ōt</i>	earth, field.
„ <i>hanāṭiṇ</i> ;	„ <i>hātṇ</i>	portion.
„ <i>nērē, entē</i> ;	„ <i>nēnē, hondē</i>	here, there.
„ <i>aḍcā</i> ;	„ <i>ul</i>	lose.
„ <i>apīā</i> ;	„ <i>pēā</i>	three.
„ <i>hēr</i> ;	„ <i>rērē</i>	sow.
„ <i>calom</i> ;	„ <i>caulom</i>	tail.
„ <i>bāyar</i> ;	„ <i>bāver</i>	rope.
„ <i>atom</i> ;	„ <i>hātom</i>	aunt (father's sister).
„ <i>ged cut</i> ;	„ <i>ged</i>	to slaughter, kill.

The most striking difference between Muṇḍārī and Asur appears to be that the auxiliary verbs are different from each other ; for whilst the former has *menā* to be, the latter has *īdanā* ; and for the negative

"not to be" we find *banoā* and *konoā* respectively, the latter being only found in the Muṇḍārī patois spoken round about Ranchi. Whilst Muṇḍārī has *taikenā* for was or remained, the Asur has *dohōlenā*. Even where words in Asur seem to be identical with the corresponding Muṇḍārī words, there is this difference between them that the Asur uses them in a more general sense, than the Muṇḍā does; e.g., *rū* is in Muṇḍārī to play (beat) the drum, also to beat with a stick; but in Asur it means only to beat, strike; *sārī*, to play; but in Asur it means to rejoice.

49. *Dravidian words in the Asur Dukmā.*

There are doubtless words used in Asur which are Dravidian; however these may have been borrowed from the Orāṇs; for example *baigā*, priest is the Orāṇ *naigā*; *ēle*, to plant, is the Kurukh *īd*; *eṭā*, second, the Kurukh *enlā*; *pūtā*, belly the same as *pūtā*; *pa'en*, *pahē* and *hōn* the emphatic affix are in both languages the same; *eyā*, *iyyō*, mother, are apparently of the same origin; *cohā*, kiss *conhā*, love, in Kurukh; *ortē rē*, once in Asur and *ort* once in Kurukh; *thaukā*, right; *aḍḍē*, place, also *tūlē*, with *ōtoṇ*, single. Some of these are met with also in Muṇḍārī and it may be a disputable question whether these words are Dravidian or Kolarian; e.g., *aḍḍē*, *thaukā*, *con* = *conhā*, *eyā*.

50. *Genuine Asur words.*

There are many words in Asur which I am unable to derive either from Muṇḍārī or Kurukh words, for example :

<i>hērē</i>	husks;	<i>hurū</i>	unhusked rice.
<i>lainī</i>	harlot;	<i>anyān</i>	mercy, kindness.
<i>pārīlā</i>	good;	<i>usad</i>	anger.
<i>līlāi</i>	distribute;	<i>sodor</i>	arrive, perhaps the seter in Muṇḍārī.
<i>dukmā</i>	speak;	<i>īrī</i>	conscience, wise (perhaps connected with the Kurukh <i>ērā</i> , sec.)
<i>minā</i>	inside;		
<i>baggī</i>	for time, season;	<i>dohō</i>	remain.
<i>kaṭij</i>	a little;	<i>usul</i>	high.
<i>nāpā</i>	well, healthy;	<i>banai</i>	many.
<i>teṇōt</i>	daughter;	<i>rokē</i>	quickly.
<i>hīlī</i>	uncle (mother's brother);	<i>javar</i>	gather.
<i>teyam</i>	son-in-law;	<i>roḍ</i>	embrace.
<i>hātā</i>	grand-father;	<i>īdanū</i>	to be.
<i>hukī</i>	brother-in-law &	<i>īyad</i>	sister-in-law, etc.
<i>hed</i>	and;	<i>barkij</i>	now-a-days.

<i>jadau</i>	cloth ;	<i>nēs</i>	this year.
<i>hinad</i>	near ;	<i>mande</i>	third.
<i>numun</i>	thus ;	<i>siriṅ</i>	to make merry, which in Santhāl is to sing.

Bīr dō roṅōlenā : bīr geṭer, geṭer !
 ṭhaukā bīr roṅōlena : baṛeā buggī rē.
 The grass is burning : grass knack ! crack !
 Well is the grass burning : in spendid beauty.

(One of the very few songs of the Asurs.)



An Inscription of the time of Kapilendra Dēva of Orissa, from Gōpīnāthapura, District Cuttack. (With an Appendix on the last Hindu Kings of Orissa.)—By BABU MON MOHAN CHAKRAVARTI, M.A., B.L., M.R.A.S.

[Read April, 1899.]

This inscription comes from the village Gōpīnāthapura in District Cuttack, Orissa. The village is 13 miles N. E. of the town Katakā, and stands on the Birūpā branch of the river Mahānadi. Its position would be about $20^{\circ} 31'$ Lat. and $86^{\circ} 4'$ long. The inscription is on a stone slab attached to the eastern gable of a middle sized temple of Jagannātha. It commemorates the erection of that temple and of the companion temple of Guṇḍicā, where the cars used to be driven to at the time of the great Ratha festival. Both the temples now lie dilapidated, and the car-festival is no longer held.

The stone slab containing the inscription is about $3'3'' \times 2'6'' \times 6''$. I edit the inscription from two inked estampages not very well done. The inscription is peculiar at least in one respect. The language is Sanskrit, but the characters are Oṛiyā. As yet this appears to be the earliest known inscription of such a kind.

To begin with, the characters generally resemble the modern Oṛiyā letters. Small differences are observable in ca, ja, ḍa, ta, dha, bha, ra, la, ha, and ya, the differences being mainly in the terminal loop. The letter ṭa is still in Kuṭīla type. The vowel marks do not differ. The conjunct consonants often differ, in several instances approaching the modern Bengali conjuncts, such as those of ṇ (in ṇka, ṇga), those of y (in sya, dya), those of v (in dhva). The letters are fairly legible, except in the middle and in some of the lower lines. They vary in size, those in the first line being $1'' \times \frac{1}{2}''$, in the last line $1\frac{1}{2}'' \times \frac{3}{4}''$, and elsewhere varying from $\frac{1}{2}'' \times \frac{1}{2}''$ to $\frac{3}{4}'' \times \frac{3}{4}''$. The lines do not run straight, but in a slipshodly curved way.

The orthography presents no great peculiarity. The *halanta* is generally conjuncted with the initial consonant of the next word (cf. ls. 6, 9 and 11); the guttural ṇ is sometimes represented by anusvāra

(*saṃga*, *raṃga* l. 8, *bhaṃgi* l. 20), and sometimes by ण (*niḥṣaṅkaḥ*, *paṅka*, l. 4); the palatal ñ is represented always by anusvāra (*caṃcala* l. 1, *Kāṃcihara* l. 17); the dental n is sometimes represented by anusvāra (*vaṃdīnām* l. 10); the avagraha is sometimes omitted *kālā(')rpitā* l. 6, *prasannō(')stu* l. 30.

The inscription takes up thirty lines. The language is of the later inflated style. Excepting the invocation and a short passage in line 29, it is entirely in verse, 27 stanzas of various metres. It was composed by Jāgali Kavi, and was inscribed by one Vakākhyā. Many verses show elegance and rhetorical skill.

According to the inscription, the temple of Jagannātha at Gōpī-nāthapura was built under the orders of Gōpinātha Mahāpātra, the minister of the king Kapilēndra *alias* Kapilēṣvara Dēva of Orissa. The inscription mentions Gōpinātha's genealogy as follows :—

Lakṣmaṇa Mahāpātra,¹

priest of the king
Kapilēndra (l. 11).

Elder son, Nārāyaṇa,
a minister of the
same king (l. 12).

Younger son,
Gōpinātha Mahāpātra, (l. 13)
of the Hārita Kula (l. 20)

Jāgali (l. 29),
born of Gōpinātha.

The inscription mentions **Kapilēndra** also as **Kapilēṣvara** (l. 17), and describes him as belonging to the solar line (l. 5) with the title **Bhramaravara** (l. 7). **Kapilēndra** is said to have defeated and caused terror in the hearts of the kings of **Karṇāṭa**, **Kalavaraga**, **Mālava**, **Gauda** and **Philli** (l. 7, cf. also lines 16 to 19). **Gōpinātha** is described as having assisted his master materially in the various conquests and to have led an invasion into **Mālavēndra's** territory, crossing many hills (l. 19).

The inscription is undated, but its time can be approximately ascertained. **Gōpinātha's** father and elder brother having previously served the same King, **Gōpinātha** must have taken service in the latter part of the king's reign. Then again the inroad to **Mālava** in line 19, verse 16, is apparently identifiable with the invasion of the Orissa

¹ Lakṣmaṇa Mahāpātra, the donor's father is mentioned in another Oriyā inscription as the "*purōhita*" or priest of Kapilēṣvara Dēva; cf. my article, Journ. As. Soc. Beng., Vol. LXII, 1893, pp. 91-2.

king into Bidar. This invasion is timed by Ferishtah as 1461 A.D.¹ After that some time must have elapsed before the new temple was erected. Hence the date of the inscription might approximately be put at 1465 A.D.

The temple contains the images of Jagannātha, Balarāma and Bhagavati Subhadrā (l. 22, v. 19). It was endowed with gardens, dancing girls, ornaments and servants, &c., (l. 24, v. 21). A Guṇḍicā temple was also built in accompaniment (l. 26, v. 23).

TEXT.²

1. 1. Ōm namaḥ Ḥri-Puruṣōttamāya ||
Maulau caṁ(ñ)cala-oūlini tilakini bhālē mukhē hāsini kaṇṭhē
mauktika-mālīni malayajaiḥ praty-aṅgam = ālēpini | hastā-
v(b)jē navanitini caraṇayōḥ kri—
1. 2. -dā-rasān = nartiniḥ jiyāc = chaicava-ṣōbhini cid-amalā Gōpāṅgan-
ālingini || [1]
Samsār-ārṇava-karṇa-dhāram = api taṁ bhakt-ārtha-samsāri-
ṇaṁ vandē Ḥri-Puruṣōttamaṁ tanu-bhṛtāṁ sanikalpa-kalpa-
drumaṁ | vēdānt-ārtham = udāhara—
1. 3. -nti khalu yaṁ yen = ākhiḥ bhāsātē hr̥ṣṭe yatra hr̥ṇiyatē padam
= api svāyambhuvani dēhinām || [2]
Sadyaḥ piyūṣa-pātō manasi nayanayōḥ kāma-cintā durantā
ṣāntā kaṣṭam vinaṣṭam janir = ajani sati lav(b)dha—
1. 4. -m = iṣṭam yathēṣṭam | pāpā-kūpāra-pāram gatam = api pitarō
dhvasta-v(b)andh-ānuv(b)andhā (yēnā) = lōki trilōki-nilaya-
magir = ayaṁ nila-ṣail-āvatamsaḥ || [3]
Niḥṣaṅkaḥ paṅka-magn-ākhiḥ dharāṇi-ta—
1. 5. -l-ōddhāra-bhū-dāra-simhaḥ svacchandam Mlōcha-vṛndaṁ prati
jagati Kalē = ādya-bhāḡē = pi Kalki | bhāsvad-vaṁṣ-āvat-
amsas = tri-jagad-adhipater = nila-ṣail-ādhināthasy = ādēṣād =
Ōdra-dēṣē samaja—
1. 6. -ni Kāpilēndr-ābhidhānō narēndrah || [4]
Sadā-tulita-yat-tulā-puruṣa-dāna-kālē = rpitān = trilōka-vijayā-
rjitān = kanaka-parvatān = sarvataḥ | vinidram = animēṣ aṇam
diviṣadaḥ = ciraṁ rakṣitum mila—
1. 7. -nti kanak-ācalē vijayinō = sya dāna-bhramāt || [5]
Karnāt-ōjjhāsa-simhaḥ Kalavaraga-jayi Mālava-dhvaṁsalilā-
jaṁghālō Gauḍa-mardi Bhramaravara-nṛpō dhvasta-Ḥhill I-
ndra-garvaḥ | saṁgrāmē dra—

¹ Elphinstone's History of India, Ed. 1874, Appendix, p. 755.

² From two ink impressions.

1. 8. -ṣṭum = ṣṇam pratibhaṭa-subhaṭāḥ kēvalan = tē valantē yēṣām
syān = nāka-nāri-kuca-kalaṣa-taṭi-kuṅkum-āṅk- [ā]mga-ram-
gaḥ || [6]
Yasy = ōccair = vāji-rāji-vikāṭa-khurapuṭ-ōdghāṭita-kṣauni-
prṣṭha-prādurbhūta-prabhūta—
1. 9. -kṣiti-kaṇa-nikarair = lakṣyamāṇē prayānē | garjad-gambhira-
bhēri-bhara-rava-vibhav-ākarpī-karṇā vivarnā murcālāḥ
kṣauni-pālāḥ sapadi samabhavan = kānan-āntē = py = anantē || [7]
Caṇḍē kō—
1. 10. -daṇḍa-duṇḍē sakṛd = api samarē yasya saṁsakta-kāṇḍē sam-
varttē sampravṛttē gatavati vilayaṁ vairi-jālē karālē | vaṁ(n)-
dinām krandinīnām nayana-ghana ghan-ā(ō)tsādyamānair =
amānair = durvārair = vāri-vārāiḥ pratipada-muditō
1. 11. -bhinna-mudraḥ samudraḥ || [8]
Tasy = āpta-haṁsaḥ sa hi haṁsa-vamṣa-kētōḥ purōdhā ma-
khakṛd-vataṁsaḥ | vidvān = **Mahāpātra**-kul-āvataṁsaḥ **Ḡri-
Lakṣmaṇ**ō = bhūt = prathita-praçaṁsaḥ || [9]
Mantri-ḥrēṇi-ḥirōmaṇi (ṇi)ḥ sa(su)mausaḥ santāva-cintā—
1. 12. -maṇiḥ pāpa-vrāja-viṣ-augha-gāruḍa-maṇiḥ sad-vṛtta-rakṣā-
maṇiḥ | padm-ōllāsa-vilāsa-vāsara-maṇiḥ putrō s sya **Nārā-
yaṇaḥ** satr-ārambha-parāyaṇō s jani jana-trāṇāya **Nārāyaṇaḥ** ||
|| [10]
Yasy = āsid = ann—
1. 13. -jō mataḥ kṣiti-bhujām **Ḡri-Gōpināthō Mahāpātraḥ** pātra-jan-
ārcan-aika-rasikḥ pātram guṇānām mahat | ḥri-kāntas =
tanayaṁ kṛtāntam = arayaṣ = cintāmaṇim mārgaṇā rājānaḥ
sura-mantriṇām vidur = amum kū—
1. 14. -ntāḥ-ca kāntam ratēḥ || [11]
Rājēndrād = adhigamya ṣōḍaṣa vara-cchattrāṇi citrāṇy = asau
durgēsu prayatēsu ṣōḍaṣa mitēṣv = āsid = aram nāyakaḥ |
va(ba)n-dikṛtya raṇēsu ṣōḍaṣa nṛpāndrō(mṣ = c = ō?)pāharat =
svāminē
1. 15. varṣē gacchati ṣōḍaṣē svayam = abhūn = mantr-indra ēkaḥ
punah || [12]
Manyē pūrvam = npūrvva-kirttir = asakṛvid-dvij-āhavē pāṛthivān
= kārūṇy-ākālita(tō) nutā(n*) pa(pra)ti-bha(blu)vō(vām)dēvo
s bhūd = Bhārgavaḥ | v(b)audi-kṛtya narē—
1. 16. -ndra-maṇḍalam = ayam yad(yō) = Ga(Gō) pinātha-cchalāt = sadyaḥ
samprati mun(ū)cat = iha vitaran svām svām pratiṣṭhām
punah || [13]
Kṛtvā samyati **Mālav-ēndra**-jayinarṁ sēn-ādhinātham tu yaṁ
Gauḍ-ēndrasya nitāntam = **Utkala**-patha-prasthāna-rōdh-ā

1. 17. -rgalam | **Qri-Khaṇḍ-Ēdri-payō-dhar-ōpari-karam** **nirmāya Kām-**
(**Ñ**)ci-haraḥ sānandam **Kapileśvarō viharatē Karṇāṭa-rāja-**
cīriyā || [14]
Cetō-vṛttir = iv = ātmanaḥ suvimalā lōkē = dhikā kīrtidā sthīr-
ācāya-riti-vad = guṇa-ma—
1. 18. -ṇi-ṇṇi = va vistāriṇi | sam(sa)nmārg-ānugatā ca santatir = iva
prāyēṇa santāpinām santāp-ōnmathanā kṛpāvad = amunā khātā
ca khāt-āvali || [15]
Garv-augham **Gurjarēndrah** pariharati-tarām = ācū **Philli-**
Narēndrah sāndrām ta—
1. 19. -ndrām = avindat = kuṇapa-gatim = agād = **Gauḍa-bhūmi-mah-**
ēndrah | bhū-bhṛu-mālām karālām pathi pathi militām ram-
(ha*)s = ōllanghya sēnā-nāthē **Qri-Gōpināthē** paribhara(va)ti
ca tām **Mālav-ēndrasya** gu (?) tām (?) || [16]
*Prāsāda—
1. 20. -m = ētam nayan-ābhirāmaṁ vyadhatta **Hāritakul-āv(b)**dhi-
candraḥ | asāra-samsāra-gabhira- paṅka-niḥpaṅka-niṣkrānty-
avalamv(b)a-daṇḍam || [17]
Jiyāt-prāsāda-cūḍā-maṇi-rama-ramaṇēḥ prānta-samsakta-bham-
(ṇ)gī bham(ṇ)ga-prāgbhāra-vi(bi)mv(b)a-sphuṭa—
1. 21. -ghaṭita-vṛ(br)hat-maṇṭhanī maṇḍalikah | uttānam nyasta-mūrt-
tiḥ prathita-sad-amṛta-prāptik-ārthō bhav-āv(b)dhērugrajō (?) -
dam(ñ)cad-ūrmni pracaya-bhaya-bhuvō = mantha-manthāna-
daṇḍah || [18]
Rāmam **Qri-Puruṣōttamam** Bhagavatim = asmin = Su—
1. 22. -bhadram tathā ratn-ālam(ṇ)kṛti-rāji-rājita-tanum bhaktyā
=yam = asthāpayat | bhūty = ēśam tritayam navam tri-jagati-
cintāmaṇinām trayam prāsā (dē*) ca samudgakē vinihitam kim
madhyamē piṣṭapē || [19]
Sauvarṇṇa-ṇṇuti-pāṇi-pā—
1. 23. -da-hṛdayō haima-prabhā-maṇḍalē bhāsvan-maṇḍala-sam nibhē
maṇi-lasat-tulā-sarōj-āsanaḥ | sō s yaṁ hāra-kirīṭa-kuṇḍala-
dharah samskāra-dhāri sadā dhyēyā(yah) svarṇa-may-ākṛtiṁ
pathi dṛṣṭr = nirmāti Nārāyaṇah || [20]
Udyānā—
1. 24. -ni navāni mālya-vidhayē kartum tri-kāl-ārccanam bhōgān
svarga-purōcitān = upacitān rāmāc = ca Rambh-ōpamāḥ | nānā-
ratna-vibhūṣaṇāni bahuḥ vāsāmsi bhūyāmsy = asau prāyacchat
-paramēṣṭhinē pariṇaḥ da (?)
1. 25. -ttēna kim svāminē || [21]
Pakṣatvaṁ tvayi yāty-ayam dvija-patiḥ pakṣ-ōnnatac = c = ābha-
vat Kām-ārē s sya samasta-vāsanam-abhūt = khyātō ha mē ca

dr̥ṣaḥ | Dr̥ṣṭṣ s smiun = adhip-ādhikāra-yugale kāmē gatiḥ sam-
prati = ty = ākhyāt = tam Garuḍaḥ

1. 26. kṛt-ām(ñ)jalir = asau papha (?) purō vartatē || [22]
Yēn = ākāri prasāri-dyuti-rajata-ṣaṭam Guṇḍio-āgāram = Īṣō
yasmin = Kailāsa-vāsa-praṇayam = adhiḡatō = hanta dēṣṣ s py =
amuṣmin | yasya prāgbhāra-khaṇḍa-sthala-vikala-nabhō—
1. 27. -maṇḍal-ājasra-liṇḍaṇ-mārttā(ta)ṇḍā(ṇda)ṣ = ca pracanḍa-ṣrama-
ṣamana-patur = mmaṇḍapē s bhūd = akhaṇḍaḥ || [23]
Svādhyāy-ābhyāsa-ghōṣair = mukharita-gaganē yajña-yūp-āvali-
bhīr = bhūyaḥ samcūbbhamānē dvija-vara-gahanē cōbbhanē ṣāsanē
s smi—
1. 28. -n| āvairam ca prapam(ñ)cam Naraka-ripur = ayaṁ Kāmapālah
Subhadrā grām-ēṣasy = āparēṣām = api bhavatu sadā mangalā
gō-jalāya || [24]
Prahād-Ōddhava-Pārthānām bhaktānām viraha-vyathām |
tyājito Gōpināthēna puṇḍarika-vilōcanaḥ || [25]
1. 29. Mimāṃsakasya nigam-ānta-vicāra-pāra-samcārīṇō s sya kavi-
paṇḍita-Gōpināthāt | jātasya Jāgali-kavē ramaṇ-ōktir = ēṣā
harṣ-ōnnatim sumanasām sarasām tanōtu || ☉ || [26]
Ṣubham = astu || **Vakākhyēna** likhitam |
1. 30. Ṣri-Gōpināthaḥ prasannō = stu siddhidō bhakta-vatsalah | Guṇa-
ratn-ākaraḥ ṣṛimān = **Kapilendra**-hr̥di-sthitaḥ ||

Abstract of contents.

The inscription begins with a salutation to God Puruṣōttama. Verses 1 to 3 invoke His blessings. By order of the God enthroned on the blue hill (i.e., Jagannātha), the king named Kapilendra appeared in the Oḍra kingdom as an ornament of the solar line (v. 4). His constant gifts at the sacred places tempted even the gods to come down (v. 5). The king, surnamed Bhramaravara, conquered Karṇāṭa, Kalavaraga (Kulbargā), Mālava and Gauḍa, and destroyed the pride of the Delhi king (v. 6). His march was indicated by the huge dust raised by the hoofs of his high horses, and the loud sounds of his bugles frightened the other kings and made them fly to forests (v. 7). The arrows of his bow put to death his enemies, the tears of whose imprisoned ladies removed the land-barrier of the sea (v. 8). He had a faithful priest named Lakṣmaṇa Mahāpātra, an ornament of the Mahāpātra Kula (v. 9). Lakṣmaṇa's son was Nārāyaṇa, the head of the ministers (v. 10). Nārāyaṇa's younger brother was Gōpinātha Mahāpātra, who was favoured by the king, and was in possession of the best qualities (v. 11). He got from the king sixteen umbrellas, took sixteen forts, imprisoned in war sixteen

chiefs, and after sixteen years became the chief minister (v. 12). Methinks Paraçurāma in the guise of Gōpinātha conquered anew the circle of kings, but unlike his previous act, replaced each king in his territory (v. 13). Having made him the Commander-in-Chief, him who defeated the Mālava king, and who stood as a bar to the inroad of the Gauḍa king, the monarch Kapilāçvara enjoyed the Çri of Karṇāṭa, levied taxes over the Khaṇḍa hill, and carried the Kāñcī city by force (v. 14). He (Gōpinātha) dug tanks by the side of roads, clear watered, well-known, calm, wide and cool (v. 15). The Commander-in-Chief Gōpinātha having crossed the terrible mountains on the way, and having conquered the Mālava king, the Gurjara king gave up his pride, the Delhi king felt dejected, and the Gauḍa king turned mean like a çavara (v. 16). The moon of the Hārita line (Gopinātha) erected this fine temple as a staff for deliverance from the mires of this unsubstantial world (v. 17). * The temple is the highest with the solar *maṇḍala* as its finials, and serves as a staff for churning nectar (the meaning not clear throughout) (v. 18). In this temple he placed Rāma (Balarāma), Puruṣōttama (Jagannātha), and Bhagavatī Subhadrā, fully ornamented (v. 19). The Nārāyaṇa was made as described in the *dhyāna* (hymn)—then follows a description of his ornaments (v. 20). For garlands new gardens, *bhōgas* fit for heaven, maidens (charming) as Rambhā, many jewelled ornaments, ample dresses, he gave to the deities—what more shall be said about the servants given ? (v. 21). “Oh Lord ! May this Garuḍa be your steed.” On his (Gōpinātha’s) saying this as if Garuḍa himself stood in front with hands clasped and wings spread (meaning throughout not clear) (v. 22). By him was raised a Guṇḍicā temple, bright and silver white, where Mahādēva felt the delights of Kailāça mountain, and on whose cloud-dividing top the sun rested (v. 23). In this Çāsana resounding with Vedic teachings, decked with numerous sacrificial posts and crowded with high class Brahmins, may Jagannātha, Balarāma and Subhadrā bring good to the village lord, the residents, (the village) cattle and (its) water ! (v. 24). By consecrating this Viṣṇu, Gōpinātha removed pangs of separation from the hearts of devotees like Prahlāda, Uddhava and Pārtha (i.e., Arjuna) (v. 25). May these charming verses of the Mīmāṃsaka Vaidāntika poet Jāgali, born of the poet and the learned Gōpinātha, increase the delight of the wise ! (v. 25). May it be good ! Written by Vakākhya. May Gōpinātha (i.e., Viṣṇu) beloved of Lakṣmī, meditated by the King Kapilendra, fond of his devotees, fulfiller of desires, and like sea in qualities, may He be gracious (unto us) ! (v. 27).

APPENDIX.

THE LAST HINDU KINGS OF ORISSA.

In the Gōpināthapura Inscription the King Kapilendra Dēva is described as of the Solar line “bhāsvad-vam̐c-āvntam̐ca(h*).” Very little authentic is known about these kings of Orissa. The time has now come to throw light into this dark chapter, and to give some account of them based on inscriptions supplemented at places by the Mādala Pāñji and other records.

A. SŪRYA VAM̐CA DYNASTY.

(5 KINGS).

I. KAPILĒNDRA *alias* KAPILĒCVARA DĒVA, BHĪRAMARAVARA.

(1434–35 A.D.—1469–70 A.D.)

Up to date the undermentioned authentic dates of this King—the founder of the Solar line—have been found¹ :—

No.	Dates.	References.
1.	4th Aṅka, Dhanu New moon,	Left side Inscription No. 3 of the Jagan-
(O.)	Sunday = 9th December, 1436	nātha temple [J.A.S.B., Vol. LXII, 1893,
	A.D.	pp. 92–3].
2.	4th Aṅka, Kumbha (?) Çukla	The temple of Mukhalingēçvara at Mukha-
(O.)	13, Monday = 18th February,	lingam, District Gañjām [Dr. Hultzsch's
	1437 A.D.	Epigraphical Report for 1895–6, No. 141,
		p. 14]. I am indebted to Dr. Hultzsch
		for an ink impression of this old Oṛiyā
		inscription.
3.	4th Aṅka, Mithana Saṅkrānti	Right side Inscription No. 2 of the Bhu-
(O.)	Kṛṣṇa 1, Tuesday = 29th May,	vanēçvara temple [J.A.S.B., Vol. LXII, pp.
	1437 A.D.	103–4].
4.	19th Aṅka, Talā Kṛṣṇa 2, Sun-	Right side Inscription No. 1 of the Bhu-
(O.)	day = 2nd November, 1449	vanēçvara temple [J.A.S.B., Vol. LXII,
	A.D.	p. 10–3].
		<i>N.B.</i> —The <i>purṇimānta</i> scheme has been used
		here, instead of the usual <i>amānta</i> scheme.
5.	19th Aṅka, Mēṣa New moon,	Right side Inscription No. 2 of the Jagan-
(O.)	Sunday = 12th April, 1450	nātha temple [J.A.S.B., Vol. LXII, 1893,
	A.D.	p. 99].
6.	Çaka 1873, Māgha Çukla 5,	The Oṛi-Kūrmaṇ temple (near Çikāḱḱa),
(S. & T.)	Thursday, Jovian year Prajā-	20th pillar, east and north face inscription
	pati = 27th January, 1452	[Dr. Hultzsch's Epigraphical Report for
	A.D.	1895–6, p. 20, Nos. 317 and 318; and my
		Mā. transcript].

¹ O. Signifies Oṛiyā in language, S. Sanskrit, and T. Telugu.

No.	Dates.	References.
7.	25th Aṅka, Çaka 1377, Bhā-	The Çri-Kūrmāṣ temple, 18th pillar, west
(T.)	drapada] Çukla 3, Saturday	face inscription [Dr. Hultzsch's Ep. Rep.,
	= 26th August, 1455 A.D.	1895-6, p. 20, No. 318; and my Ms.].
8.	Çaka 1377, Bhādrapada moon-	Copper-plate inscription of the king Gāna-
	eclipse (?), the year Yuvan	Dēva of Kōṇḍa-vidu [Dr. Hultzsch, Ind.
(S.)	= August (?), 1455 A.D.	Ant., Vol. XX, p. 391].
9.	1461 A.D.	... Ferishta, l. c. Elphinstone's History of India,
		Appendix, p. 755; and Sewall's sketch of
		the dynasties of Southern India, p. 23.
10.	32nd (33rd) Aṅka, Çaka 1382,	The Çri-Kurmaṣ temple, 18th pillar, west
(T.)	Jyēṣṭha Va 5 (? 7), Monday,	face inscription [Dr. Hultzsch's Ep. Rep.,
	the year Vikrama = 12th May,	1895-6, p. 19, No. 284; and my Ms.].
	1461 A.D.	
11.	35th (37th) Aṅka, Mēṣa Kṛṣṇa 4,	Left side Inscription No. 5 of the Jagan-
(O.)	Wednesday = 25th April, 1464	nātha temple [J.A.S.B., Vol. LXII, pp.
	A.D.	95-6].
12.	Çica 1465 A.D.	... The present inscription of the Gōpīnātha-
(S.)		pura temple.
13.	41st Aṅka, Dhanu Çukla 7,	Left side Inscription No. 4 of the Jagan-
(O.)	Sunday = 14th December,	nātha temple [J.A.S.B., Vol. LXII, pp.
	1466 A.D.	93-4].

From the Aṅka inscriptions, Kapilēçvara's accession year can be ascertained as follows :—

4th Aṅka or 3rd year	= 1436-7 A.D.
19th Aṅka or 16th year	= 1449-50 A.D.
25th Aṅka or 21st year	= 1454-5 A.D.
33rd Aṅka or 27th year	= 1460-61 A.D.
37th Aṅka or 30th year	= 1463-4 A.D.
41st Aṅka or 33rd year	= 1466-7 A.D.
* * The 2nd Aṅka or 1st year = 1434-5 A.D.	

According to Aṅka calculations, the last Aṅka of Kapilēçvara and the second Aṅka of his successor Puruṣōttama should fall in the same year. Hence Kapilēçvara's death took place in 1469-70 A.D.¹

Narasimha Dēva IV. of the Gaṅga dynasty was reigning in 1397 A.D. [J.A.S.B., Vol. LXIV, 1895, p. 133]. The thirty-seven years intervening between this date and the accession of Kapilēçvara Dēva in 1434-5

¹ According to the Mādālā Pāñji or the Chronicles of the temple of Jagan-nātha, the king ascended the throne at Camp Kṛttivāsa (Bhuvanēçvara) on Wednesday, Kakaṛī 2, Ça 4; and died on the banks of the Kṛṣṇa-Vēnyā river (the Kṛṣṇā) on Pauṣa Kr. 3, Tuesday. Neither of the dates comes out correct with the week day mentioned.

A.D. are at present epigraphically blank¹. If the Mādaḷā Pāñji is to be believed, Kapilēṣvara succeeded a Bhānu Dēva, whose name (surname ?) was, according to one version, Akatā-Abatā, and according to another, Matta (drunk). Among the later Gangas, the usual succession was a Narasiṃha Dēva followed by a Bhānu Dēva and so on. The thirty-seven years intervening will allow either of only one Bhānu Dēva after Narasiṃha Dēva IV, or of one Bhānu Dēva followed by a Narasiṃha Dēva, and then a second Bhānu Dēva. Looking to the rather short period, and the average long reigns of the Eastern Ganga Kings, the first supposition of only one Bhānu Dēva appears more probable.

The accounts given in the Mādaḷā Pāñji show that Kapilēṣvara got to the throne probably with the aid of the Bahmanī king (Aḥmad Shāh I.). The present inscription gives him an *alias*, Kapilēndra, and a title Bhramaravara. Gānadēva's Copper-plate inscription speaks of his capital being at Katakā on the bank of the river Mahānadi. He was evidently a powerful King, and extended his dominion from the bank of the Ganges on the north to that of the Kṛṣṇā on the south. His whole reign was spent in warring with the Hindu Kings of Vijayanagara, or with the Mahomedan Kings of the Bahmanī dynasty, or in suppressing internal revolts. The Mādaḷā Pāñji mentions that he had numerous sons, among whom Puruṣōttama Dēva was one, but not the eldest.

II. PURUṢOTTAMA DĒVA.

(1469-70 A.D.—1496-97 A.D.)

The following give all the reliable dates as yet known of this king:—

No.	Dates.	References.
1.	2nd Aṅka, Mēṣu Çu 12, Thurs-	Left side No. 2
(O.)	day = 12th April, 1470 A.D.	Right side No. 1
		} Inscriptions of the Jagannātha temple [J.A.S.B., Vol LXII, 1893, pp. 91-2, 98.]
2.	3rd Aṅka, Çāka 1392, Āçvīja	The Çri-Kūrmaṃ temple, 49th pillar, north
(T.)	Çuddha pratipad, Tuesday =	face [Dr. Hultzsch's Epigraphical Report
	25th September, 1470 A.D.	for 1895-6, No. 365, p. 23].
3.	3rd Aṅka Mūrgaçira Kr. 13,	Left side Inscription No. 1 of the Jagan-
(O.)	Tuesday = 28th November,	nātha temple [J.A.S.B., Vol. LXII, pp.
	1470 A.D.	90-1].
4.	Çāka 1398, year Khara, Caitra	The Çri-Kūrmaṃ temple, 49th pillar, west
(T.)	Va (? Çu), Ādivāra (Sunday)	and south faces [Dr. Hultzsch's Ep. Rep.,
	= 31st March, 1471 A.D.	1895-6, No. 366, p. 23].
		(if Va be Çu).

¹ There is an inscription of probably this King in the Çri-Kūrmaṃ temple (11th pillar, east face) which purports to be dated in 1324 Çāka or 1402-3 A.D. (No. 299, Dr. Hultzsch's Ep. Rep. 1895-6, p. 20). But I have not got the week day and the correct figures yet. Hence it is not taken into consideration.

No.	Dates.	References.
5.	1471 A.D.	Ferishta, l.c., Elphinstone's Hist. of Ind. (1889 ed.), Appendix p. 756; and Sewell's sketch of S. Indian dynasties, p. 23.
6.	7th (4th) Aṅka, Çaka 1393,	The Çri-Kūrmān temple, 2nd pillar, north
(T.)	Āsāṛha Çu 2, Thursday, the	and west face [Dr. Hultzsch's Ep. Rep.,
	Jovian year Khara = 20th	1895-6, p. 19, No. 274; and my Ms.].
	June, 1472 A.D.	
6. 7.	1477 A.D.	Ferishta, l.c. Elphin., App. p. 756; and Sewells' sketch, p. 23.
8.	15th (17th) Aṅka, Mēṣa, Di 10	My reading of the Oriyā Copper-plate grant
(O.)	(11), new moon, Monday,	to the Balasore Bhūñyās [Ind. Ant., Vol.
	solar eclipse = 7th April, 1483	1, p. 355]. The original reading seems
	A.D.	to have been wrong, but Prof. Kielhorn
		has arrived at the correct English equi-
		valent in Ind. Ant., Vol. XXII, p. 108.
9.	19th Aṅka, Sīmha Çu 8, Thurs-	Right side Inscription No. 4 of the Jagan-
(O.)	day = 18th April, 1485 A.D.	nātha temple [J.A.S.B., Vol. LXII, 1893,
		p. 100-1].
10.	Çaka 1411, the Jovian year	A Koṇḍa-Viḍu Inscription [Sewell's sketch
(T.)	Kilaku = 1488-89 A.D.	south, dyn., p. 48]. The Çaka year current
		was apparently used.
11.	25th Aṅka, Viṣā (Vṛṣa) Saṅ-	Çri-Kūrmān temple, 1st pillar (of Nos. 272
(O.)	krānti, Çu 8, Thursday = 27th	and 273), not reported in Ep. Rep. for
	May, 1490 A.D.	1895-6. I am indebted to Dr. Hultzsch's
		for two ink impressions of this inscription.
12.	Çaka 1417, the Jovian year	The Çri-Kūrmān temple, 41st pillar, north
(T.)	Rākṣasa, 32nd (? 33rd) Aṅka,	face inscription [Dr. Hultzsch's Ep. Rep.,
	Kārttika Çuddha 13, Manda-	1895-6, p. 202, No. 347].
	vāra (Saturday) = 31st Octo-	
	ber, 1495 A.D.	

With the help of the Aṅka inscriptions the precise year of Puruṣōttama Dēva's accession can be found out. The Aṅka dates are

2nd Aṅka or 1st year	= 1469-70 A.D.
3rd Aṅka or 2nd year	= 1470-71 A.D.
4th Aṅka or 3rd year	= 1471-2 A.D.
17th Aṅka or 14th year	= 1482-3 A.D.
19th Aṅka or 16th year	= 1484-5 A.D.
25th Aṅka or 21st year	= 1489-90 A.D.
32nd Aṅka or 26th year	= 1494-5 A.D.

*** The 1st year was 1469-70 A.D.

From his successor's Aṅka dates, the time of Puruṣōttama's death can be deduced. It took place in 1496-97 A.D.

On the death of Kapilāçvara Dēva, his sons fought with one another for the throne. Ultimately Puruṣōttama secured it with the help of the Bahmanī king Muḥammad Shāh II. For this aid, he had to cede to the

Bahmani king the southern-most districts of Kōṇḍapalli and Rājamahēndri. Ferishta calls him "Amber Rai" which is apparently a corruption of the title "Bhramaravara Rāya"—a title still given in Orissa to a prince, not always the eldest one. Later on, the Orissa king appears to have repented of the bargain, and to have attempted a conquest of the ceded districts. This led to an expedition into Orissa in 1477 A.D. by the Bahmani king Muḥammad, which Ferishta reports as having been successful. Anyhow these districts passed ultimately into the hands of the Orissa king, as the Kōṇḍa-Viḍu inscription of 1488-9 A.D. shows.

The king also waged war with Vidyānagara (or as the Mahomedans put it Vijayanagar). *Caitanya-carit-āmṛta*, the well-known biography of the great Bengal Vaiṣṇavite preacher, Caitanya, says that the King Puruṣōttama Dēva conquered Vidyānagara, and thence brought a jewelled *siṃhāsana* (throne) which he presented to Jagannātha, and also the image of *Sākṣi-gōpāla* which he kept in his capital at Kaṭaka (*Çait. car. āmr.*, Madhya Khaṇḍa, 5th Paricchēda). The first Vidyānagara dynasty was then tottering on its throne, and was shortly after replaced by the second dynasty.

The few details given in the Mādālā Pāñji are mainly taken up in describing an expedition of this King into Kāñci. If there be any truth in it, then it is likely connected with the raid of the Bahmani king Muḥammad Shāh II, who in 1477-8 A.D. made a dash towards Conjeeveram, and returned with an immense booty. Puruṣōttama Dēva might have joined the said king as an ally.

According to the Mādālā Pāñji this king erected the Bhōga-maṇḍapa (refectory hall) of Jagannātha temple in his 7th Aṅka (1473-4 A.D.); and in his 9th Aṅka (1475-6 A.D.) he built the inner wall and the cooking rooms of that temple.

III. PRATĀPA RUDRA DĒVA.

(1496-97—?1539-40 A.D.)

The following dates of this King are known as yet:—

No.	Dates.	References.
1. (O.)	4th Aṅka, Kakṛā Çu 10, Wednesday = 17th July, 1499 A.D.	Left side Inscription No. 6 of the Jagannātha temple [J.A.S.B., Vol. LXII, 1893, pp. 96-7].
2. (O.)	5th Aṅka, Dhanu 3 (?) Kṛ. (?) Monday = ? December, 1500 A.D.	Left side Inscription No. 7 of the Jagannātha temple [J.A.S.B., Vol. LXII, 1893, p. 97].
3. (T.)	Çaka 1425, the Jovian year Rudhirōdgārīn, Kārttika Çuddha Purnamī, Friday = 1503 A.D., (?) 3rd November.	The Çrī-Kūrmān temple, 41st pillar, north face [Dr. Hultsch's Ep. Rep., 1895-6, p. 22, No. 346].

No.	Dates.	References.
4.	1509–10 A.D. (17th Aṅka of the Mādala Pāñji).	Mahomedan historians, l.c. Hunter's History of Orissa, Vol. II, pp. 9–10, and App. VIII, p. 193.
5.	1510 A.D. (February and March).	<i>Caitanya-carit-āmṛta</i> , beginning of the 7th paricchēda, Madhyama Khaṇḍa; <i>Caitanya-maṅgala</i> , Antya Khaṇḍa, 2nd and 3rd Adhyāya.
6.	1511 A.D., Ratha festival.	<i>Cait.-car.-āmṛ.</i> , Madhya Khaṇḍa, 14th paricchēda; cf. <i>Cait. maṅ.</i> , Antya Khaṇḍa, 5th Adhyāya.
7.	Çaka 1436 = 1514–5 A.D.	Two Inscriptions at Udayngiri [Sewell's sketch of the southern dynasties, p. 48, note 4].
8.	1515–6 A.D.	An Inscription in the Varadarāja-svāmi temple at Conjeveram [Chingleput District Manual, pp. 435–6, l.c., Sewell's sketch south. dyn., p. 119 and p. 48 note 4].
9.	? 1519–20 A.D.	<i>Cait.-car.-āmṛ.</i> , Antya Khaṇḍa, 9th paricchēda.
10.	1522 A.D. (32nd Aṅka of Mādala Pāñji)	Ferishta, l.c., Elphinstone's Hist. Ind., App., p. 760; Hunter's Hist. Orissa, Vol. II, App. VIII, p. 193.

Pratāpa Rudra's accession year falls in 1496–97, as calculated from his only reliable Aṅka date in the Jagannātha temple. The time of his death is uncertain. According to Mādala Pāñji he was succeeded first by his son Kālu-ā Dēva who reigned for a year and five months, and then by another of his sons Kakhāru-ā Dēva who ruled for only three months. They were killed, one after the other, by their minister Gōvinda Vidyādhara. The latter then usurped the throne, and founded the small dynasty known as the *Bhoi*. One inscription of Gōvinda Dēva is known in the temple of Jagannātha. It is dated 4th Aṅka, Bichā Çukla Trtiyā, Tuesday, or 30th October, 1543 A.D. [J.A.S.B., Vol. LXII, 1893, pp. 101–2]. From this it is deducible that Gōvinda Dēva began to reign in 1541–42 A.D. So that if the Mādala Pāñji's dates as regards Kakhāru-ā and Kālu-ā Dēvas be accepted, Pratāpa Rudra's last year would fall in 1539–40 A.D. According to a tradition noticed in the *Jagannātha-carit-āmṛta*, an Oṛiyā biography of Jagannātha Dāsa—a disciple of Caitanya and the founder of the Atibara subsect of Vaiṣṇavas in Orissa—Pratāpa Rudra survived Caitanya. The latter died, according to his biographies, in 1455 Çaka or 1533–4 A.D. So then Pratāpa Rudra might have been reigning at least in 1535 A.D., and there is nothing improbable in his reigning up to 1539–40 A.D.

It was a stirring time. In the north in Bengal, Ḥusain Shāh had been consolidating his kingdom; in the south the Vidyānagara monarchy

was rising again under Narasa of the 2nd dynasty; and a few years later Quṭb Shāh, general of the Bahmanī king, founded the kingdom of Gōlkōṇḍā. Pratāpa Rudra, after he had been on the throne for about 5 or 6 years, became engaged in a war with Narasa. Mādālā Pāñji says that he conquered the king; but two Vidyānagara copper-plates, one of Acyuta Rāya and the other of Sadācīva Rāya, speak of Narasa conquering the Gajapati ruler.¹ In 1509 A.D. Ismāil Ghāzī (named Surasthāna in M. Pāñji), a general of the Bengal Nawab, made a dash into Orissa, ravaged the country, sacked Puri town and destroyed a number of Hindu temples. Pratāpa Rudra hurried from the south, and the Mahomedan general retreated. He was closely pursued and defeated on the bank of the Ganges (M. Pāñji). The general took refuge in Fort Maudāran (Subdivision Jehanabad, District Hooghly), and was besieged. But one of the Rāja's high officers, Gōvinda Vidyādhara, went over to the enemy's side; and so the Rājā had to raise the siege and to retire to Orissa. This war and the destruction of the Hindu images have been mentioned in several places in the *Caitanya-maṅgala* alias *Bhāgavata*, one of the earliest biographies of Caitanya the Bengal preacher (composed circā 1550-60 A.D.).²

It was also a period of considerable religious ferment. Vallabhācārya had begun his religious preachings in the north; and Caitanya began his religious wanderings in Bengal, Orissa and elsewhere. In February 1510 A.D., Caitanya came to Puri and stopped for two months. At that time Pratāpa Rudra had gone to the south, and was fighting with Kṛṣṇa Rāya who had just then come to the throne of Vidyānagara. Wandering in the south after a year Caitanya came back to Puri. There at the time of the Ratha festival the king and the preacher met; and according to the biographies, Pratāpa Rudra was converted and became a devoted disciple.

Several of the king's officers also became Caitanya's disciples, among whom the most prominent was Rāmānanda Rāya, for some time governor of Rājamahēndri. It is related in *Caitanya-carit-āmṛta* (Antya Khaṇḍa, 9th Pariccheda) that Rāmānanda's brother Gōpinātha Bāraṇsā, who was the revenue officer in charge of Māllyātha Daṇḍapāṭa (at present the eastern part of Midnapur District) fell in arrear of a large revenue—two lakh Kāhāns of cowries, and was ordered by the king to be put to death. He was however saved and reinstated by the mediation of Caitanya's disciples.

¹ Ep. Ind., Vol. III, p. 152; Ep. Ind., Vol. IV, p. 12, "Virya-śaḍagram Turuṣkaṁ Gajapati-nṛpatiṁ c = āpi jituṁ tad-anyaṁ."

² *Caitanya-maṅgala* alias *Bhāgavata*, Antya Khaṇḍa, 2nd Adhyāya, pp. 772, 779-80; 4th Adhyāya, pp. 865, 866.

In another Vaiṣṇavite work, Jayānanda's *Caitanya-maṅgala*, it is said that Pratāpa Rudra consulted Caitanya about invading Bengal. The preacher dissuaded him, pointing out that the war would be disastrous for Orissa [i.e. the Bengali Magazine *Śrī-Śrī-Viṣṇupriyā Patrikā*, Kārttik 1897, p. 477].

The latter part of Pratāpa Rudra's reign seems to have been spent chiefly in the south. Kṛṣṇa Rāya, the greatest king of the Vidyānagara second dynasty, invaded the Gajapati territory in 1514-5 A.D., defeated Virabhadra son of Pratāpa Rudra, took prisoner his uncle Tirumalappa Rāya, and conquered all the tract south of the Gōdāvarī. The Vidyānagara generals also made incursions northwards up to Ganjam; and finally Pratāpa Rudra had to make a treaty and to give his daughter in marriage to the victorious monarch.

In 1522 A.D. Pratāpa Rudra waged a long and desultory war with Quṭb Shāh of Gōlkōṇḍā. According to the Mādala Pāñji neither side gained any decisive victory; but Ferishta says that the Hindu king was defeated, and lost a part of his territory.

IV. KĀLU-Ā DĒVA.

(? 1539-40 A.D. — ? 1541-42 A.D.)

Pratāpa Rudra left several sons, and an ambitious and powerful minister, Gōvinda Vidyādhara. The eldest of the sons succeeded under the title Kālu-ā Dēva. No inscription of this king is known. According to the Mādala Pāñji he ruled for one year, five months and three days. He was murdered by the minister.

V. KAKHĀRU-Ā DĒVA.

(? 1541-42 A.D.)

Another son of Pratāpa Rudra succeeded Kālu-ā Dēva under the above title. After a brief and disturbed rule of three months, he, too, was killed by the all-powerful minister. Gōvinda then had the remaining sons of Pratāpa Rudra murdered, and ascended the throne under the title of Gōvinda Dēva. He founded the small *Bhō-i* (writer) dynasty, which with Tēlinga Mukunda Haricandana ruled up to the final Mahomedan conquest of Orissa in 1568 A.D.

B. BHŌ-I DYNASTY.

(4 KINGS):

GŌVINDA DĒVA.

(1541-42 A.D.—? 1549 A.D.)

Only one inscription of this king is known:—

4th Azka, Bichāṅkula 3rd, Tuesday=	Right side Inscription No. 5 of the Jagannātha temple [J.A.S.B., 1893, pp. 101-2].
30th October, 1543 A.D. (Oṛiyā).	

❖❖ The first year fell in 1541-42 A.D.

According to one version of the M. Pāñji he ruled seven years; according to another version 11 years and seven months. The shorter period is accepted as being more probable. It is more consistent with the reigning years which follow; and as Gōvinda Vidyādhara was in high service in 1509 A.D., he could not be expected to reign long after 1541 A.D. In his 7th Aṅka (1545-46 A.D.) he is said to have waged war with the king of Gōlkōṇḍā. While encamping in the south, his sister's son Raghu Bhañja Chōṭarāya revolted in Orissa. The king hurried back, defeated the rebels who were being assisted by Bengal Mahomedans, and drove them beyond the Ganges.

II. CAKĀ PRATĀPA DĒVA.

(? 1549 A.D.— ? 1557 A.D.)

This son of Gōvinda Dēva succeeded. According to one version, he ruled eight years; according to another, twelve years and a half. The shorter period has been accepted. He is represented as a bad king, who oppressed the people.

III. NARASIMHA RĀYA JĒNĀ.

(? 1557 A.D.)

According to Mādaḷā Pāñji he had just ascended the throne of his father, when Mukunda Haricandana rebelled and murdered him. He was on the throne for only one month and sixteen days.

IV. RAGHURĀMA JĒNĀ.

(? 1557 A.D.— ? 1559-60 A.D.)

The brother of the above succeeded. Mukunda Haricandana continued to revolt, defeated and imprisoned the king's chief minister Danē-i Vidyādhara, defeated and imprisoned Raghu Bhañja Chōṭarāya who had invaded again from the Bengal side, and finally murdered the king, after a disturbed rule of one year, seven months and fourteen days.

C. TĒLIṄGĀ DYNASTY.

(ONE KING).

MUKUNDA DĒVA, HARICANDANA.

(1559-60 A.D.—1568 A.D.)

The last independent Hindu King of Orissa:—

The following may be ascribed to his reign:—

1. A.H. 968-1560 A.D. ... A silver coin of Jalāl Shah, mint Jājpur [Thomas' Chronicles of the Pathan Kings of Delhi, p. 417].

2. A.H. 978 = 1564-65 A.D. ... Stewart's *History of Bengal*, ed. 1847, pp. 95-6; Hunter's *History of Orissa*, Vol. II, p. 12.
3. A.H. 975 = 1568 A.D. (10th Hunter's *Hist. Orissa*, Vol. II, page 10. *Aṅka of the M. Pīṇji*). note 29, p. 31; Mr. Beames, *J.A.S.B.*, Vol. LII, p. 283 note.

Mukunda Dēva was a Telugu by birth. He got to the throne by a successful revolt. The silver coin of Jalāl Shāh with the mint mark of Jāipur shows that the Mahomedan king of Bengal assisted in 1560 A.D. Raghu Bhañja Chōṭarāya in his invasion of Orissa, and the coin was struck apparently when on the march to Kaṭaka. Mukunda Dēva however defeated Raghu Bhañja, and imprisoned him. In 1564-65 A.D. the Emperor Akbar sent an ambassador to Orissa, and entered into a treaty with the king. The latter in return sent an ambassador to Delhi. The treaty was intended as a check to the Bengal king Sulaimān Karrārānī. The latter, however, kept quiet, until he found Akbar fully engaged in wars in the west. He then attacked the Orissa king who had come to the banks of the Ganges. Mukunda Dēva took refuge in Fort Kōṭsamā and defended himself therein. Then the Bengal king detached a part of his force, and sent them round to Orissa through Mayūrabhañja and thence southwards by the Kāṣabāsa river. This force under Illāhābād Kālāpahāra began to ravage Orissa, and defeated the king's deputy; while one of the Oṛiyā chiefs raised the standard of revolt. Hearing this the Orissa king hurried south, fought with the rebels and was killed. The rebel chief was in turn killed by the Mahomedans. Raghu Bhañja Chōṭarāya who was lying imprisoned, escaped and attempted to take possession of the throne. After four months' fight with Kālāpahāra, he too was slain; and the Mahomedans took final possession of Orissa. This conquest took place in 1568 A.D.

An Inscription of the time of Nayapāla Dēva, from the Kṛṣṇa-dvārikā Temple at Gayā.—By BABU MONMOHAN CHAKRAVARTI, M.A., B.L., M.R.A.S.

[Read April, 1899]

This inscription is on a stone slab fixed in the right gateway of the Kṛṣṇa-dvārikā temple in Gayā town. The present temple with its image of Kishenji was built 70 or 80 years ago by a Gayāwāl Brahmin, Dāmōdar Lāl Dhōkrī. But it has been evidently set up on an old site on which had stood a temple containing images of gods Kṛṣṇa and Mahādēva. The inscription was first brought to public notice by General Cunningham, and a facsimile was printed in the Archaeological Survey Report of India, Vol. III, Plate XXXII. Dr. Rajendra Lāl Mitra tried to decipher it, but did not succeed, (see the Proceedings of the Asiatic Society of Bengal, August 1879). I edit the text from two fairly good ink impressions taken by Babu Paramēṣvara Dayāl, Court of Wards' Head Clerk, Gaya. I have had also the advantage of consulting the original in cases of doubtful readings.

The writing consists of 18 lines and covers a space of 2' 4" × 1' 0". The letters are well cut, and where entire are legible. But in many lines the letters are more or less damaged, particularly in the 4th, and 7th to 14th lines. The large number of damaged letters has caused much difficulty in decipherment. In size the letters are $\frac{3}{16}$ " × $\frac{1}{16}$ ". The written characters are of the type known as Kuṭila. The Mātrās (the top horizontal lines) are in full swing; the marks of medial vowels ē and ō are pendent from the top lines as in modern Bēngali and Oṛiyā; and the conjunct consonants including those of ṇ and ñ are carefully engraved.¹

The inscription is in Sanskrit, and excepting the invocation at the beginning, is in verse throughout. The verses are twenty-one in number and are in various metres. The orthography shows little peculiarity.

¹ These peculiarities I have observed also in another Gayā inscription of the time of Nayapāla Dēva (*Qri-Nayapāla-dēva-nṛpatē rājya-ṣṛiyam bibhrataḥ* l. 14). This inscription of 15 lines does not appear to have been published yet.

The conjunct consonants are correctly given; the nasals ṅ and ñ are generally properly used; with ç, ṅ is used and not anusvāra (as *vaṅcē* for *vaṁcē* in line 4, *aṅcu* for *amcu* in line 16); in line 12 one *lupta* *a* has been shown with ā (*yathārthā s laṅkārah*).

The inscription is a *praṣasti* (l. 17) describing the erection of a temple to Lord Janārdana by a Gayā Brāhmin named **Viṣvāditya**. The dedicator was a **Mahā-dvija** (l. 4), an euphemistic term for a low class Brāhmin who assists in the offering of piṇḍas. His genealogy is thus given :—

Paritōṣa (l. 5, v. 5).

|
Son

Çūdraka (l. 6, v. 7).

|
Son

Viṣvāditya (l. 8, v. 9).

The *praṣasti* was composed by one **Sahadēva**, who was also a *vāḍi-vaidya* or veterinary physician. The engraving was done by the artisan **Saṭṭa-Sōma** son of **Adhipa-Sōma**.

The historically valuable portion of the inscription is to be found in the last verse. It states that the *praṣasti* was written, while **Nayapāla Dēva** was reigning. The year is given as *daça-pañca-samvatsarē*, which ordinarily would mean "in the year 510." But unless the year be referred to some unknown era (like Harṣa or Cādi), the inscription cannot by any means be referred to so early a date. It seems more reason able to take the expression as *daça* and *pañca*, or the **fifteenth year** of the king **Nayapāla Dēva**.¹

The **Nayapāla Dēva** of the present inscription is apparently identical with the well known king of that name belonging to the **Pāla** dynasty of Magadha, who was the son of **Mahipāla**, and who has been mentioned in several inscriptions. The epigraphical characters and the find-spot of the inscription do not allow of any other identification. The time of this **Nayapāla Dēva** has not yet been precisely ascertained. An approximate idea of his time can, however, be deduced from the *Tibetan Chronicles* compiled by **Rai Çaratcandra Dās Bahādur**, in his article on "Indian Pandits in Tibet" (*Journal of the Buddhist Text Society of India*, Vol. I, pp. 7-31). Ācārya **Dipaṅkara Çri-Jñāna** alias **Atiçā** was a contemporary of **Nayapāla Dēva**, and *Bu-Ston's Chos khyun* gives the following relevant facts. **Atiçā** was residing at **Vajrāsana**

¹ In the other unpublished inscription of **Nayapāla Dēva**'s time, the year is distinctly given as fifteen "*Samvritē taras-aiva pañca-daçame rājyasya samvatsarē*" (l. 14).

(Bōdh Gayā) when the king of the Karṇya in the west invaded Magadha, and a war ensued between him and Nayapāla. The invaders sacked several towns at first, but were ultimately defeated. Atiṇḍa mediated and succeeded in bringing about a treaty between the two kings (p. 9 note). Apparently some time before this he had been appointed by Nayapāla¹ as high priest of the Buddhist Vihāra at Vikramaçila (p. 9). When he had been there for some time, the Tibetan king, Lha Lama Yes'es hod, sent a deputation to India under Rgyā-tsan for inducing Atiṇḍa to come to Tibet, but the latter declined to go (p. 13). Shortly after, this king died in captivity, and was succeeded by his nephew, prince Cān Cūb. After a year (p. 15) the prince sent Nāg-tsō to Vikramaçila again. In that monastery Nāg-tsō stayed for three years (p. 23), and at length persuaded Atiṇḍa to start for Tibet. En route while in Nepal, Atiṇḍa wrote an epistle to the king Nayapāla, named *Vimala-Ratna-Lēkhana* (pp. 26 and 31). Atiṇḍa lived in Tibet for twelve years ("thirteen years" in another place), and died in 1053 A.D. (p. 30).

The above data enable us to arrive at the following dates :—

1. Atiṇḍa died in 1053 A.D.
2. He proceeded to Tibet in 1042 A.D.²
(twelve years)
3. He met Nāg-tsō first in * 1039 A.D.
(three years)
4. The Tibetan king died in 1038 A.D.
(one year)
5. Atiṇḍa met Rgyā-tsan in ? 1036-7 A.D.
6. He mediated between Nayapāla and
the king of Karṇya in ? 1035 A.D.
7. He was appointed (by Nayapāla)
high priest of Vikramaçila ? 1033 A.D.

Apparently therefore the king Nayapāla Dēva was reigning in 1033 A.D. His accession could not have taken place much further back, for according to the Sārnāth inscription (Ind. Ant., Vol. XIV, pp. 139-140), his father Mahipāla was reigning in V.S. 1083 or 1026 A.D. Possibly the king of Karṇya invaded Magadha expecting to have better success with a new, and therefore young and inexperienced king. Considering the various facts, the king Nayapāla might be fairly assumed to

¹ The name of the king has been given in pp. 2 and 11 as Mahipāla, apparently by mistake.

² "In 1042 A.D., the famous Atisha, a native of Bengal, who is known in Tibet as Jovo-rje or Jovo-rtishe, also came there." Rockhill's *Life of Buddha*, p. 227.

have ascended the throne between 1030 and 1033 A.D. The fifteenth year takes us to 1044 to 1047 A.D., or briefly, *Circa* 1045 A.D.

Babu Çaratcandra Dās has compiled his article chiefly from Bu-Ston's *Cos hbyuṅ* (rin-tseṅ). Bu-Ston was the principal disciple of Atiçā (Rockhill, p. 227). Consequently his work might mainly be considered contemporaneous, and therefore more reliable than Tārā-nātha's or similar historical works, which appeared long after Atiçā's death.

TEXT.¹

1. 1. Om Namō Bhagavatē Vāsudēvāya || Unnidra-nīlakamal-ākara-kāya-kāntiḥ svarṇa-ābhīrāma-rucira-dyuti-pitavāsaḥ | udbhāsayanāna iva cañcalayā ghanauḥ Viṣṇuḥ priyādvaya-varēna • yunaktu yuṣmān || [1 ||].²
1. 2. Vyānirmāya samasta-vastu-sukhinō viprān prajānām patir = yām = adhyāsta iv = ātman = aiva paritō mūrtti-prapañcam dadhat | uttuṅgaiḥ çarad-abhra-çubhira-çucibhiḥ saudhaiḥ kṛt-ālaṅkṛtir = mmōkṣa-dvāram = anarggalaṁ ja—
1. 3. -gati sā Çrīmad-Gayā gīyatō || [2 ||].³ Vēd-ābhyāsa-parāyaṇa-dvija-gaṇ-ōdgirṇ-ōgra-pāṭha-kramād = uccair = uccarita-dhvanī-vyatikarair = yatn-āvadhāryā girah | kiñ = c = ājasrita-hōma-dhūma-pāṭala-dhvānt-āvṛtau sāmpratam dharmmo
1. 4. yatra mahā-bhayād = iva Kalēḥ kālasya samtiṣṭhatō || [3 ||]. Atyādr̥tair = guṇa-nayair = uru-nīla-padma-niçchadma-sadmani satām sukṛt = ābhimarçō | nihāra-hāra-çarad-indu-vivu(bu)ddha-kunda-sandōha-sundara-Mahā-dvija-rāja-vaṅ(m)çō
1. 5. || [4 ||].⁴ Ajāta-lakṣma-dvija-rāja-çēkharah samantatō = bhūri-vibhūti-bhūṣaṇah | va(ba)bhūva dhanyō giri-rāja-putrikā-priy-ōpamēyah Paritōṣa-samūjakah || [5 ||].⁵ Ananya-sāmānya-dig-anta-mandiraiḥ tri-vargga-samsarggi-guṇ-ā—
1. 6. çrayair = jagat | çarat-sudhā-dhāma-gabhasti-taskaraiḥ saman-tatō yasya yaçōbhīr = āvṛtam || [6 ||]. Dvija-vara-vinatā-nandana-niramyā-gatikah samāçritō = lakṣmyā | tasya tad = anu tanu-janmā mura-ripur = iva Çūdrako bhūtaḥ || [7 ||].⁶
1. 7. Dūr-ōdyāta-çarat-sudhā-nidhi-sudhā-kund-ābhīrāma-ecchavi-ecchā-yaiç = ecchannam = abhūd = yaçōbhīr = abhitō yasya tri-lōki-talam | karpūrain = iva pūritam malayaja-kṣōdair = iv = ālēpitam kṣuvdha(bdha)-kṣīra-payōdhi-tuṅga-lahari-lōhair = iv = āplā—

¹ From the original and two ink impressions.

² Metre Vasantatilakā.

³ Metre Çārdūlavikṛitā; and of the next verse.

⁴ Metre Vasantatilakā.

⁵ Metre Vaṁçastha; and of the next verse.

⁶ Metre Āryā.

1. 8. vitam || [8 ||].¹ Satyam dharmma-sutē sthīratvam = acalē gāmbhīryam = ambhō-nidhau va (ba) hv-ācārya-guṇā matiḥ sura-gurau tējasvitā bhasvati | etē santi guṇāḥ pṛthak = param = udayacadbhir = jigiṣā-rasair = **Vvīqvādityam** = ajijanat = sutam = a-
1. 9. sāv = ēbhīḥ samastaiḥ ṛitam || [9 ||]. Yas = tāpānta-karaḥ sudhā-nidhir = jv = āpūrṇaḥ kalānām gaṇair = yas = tung-ābhuyday-ācṛitō ravir = iva prauḍha-pratāp-ōdayaḥ | pratyantah karaṇ-ābhivāñchita-phal-ājasra-pradāna-ṛibhiḥ cṛiṣṭō
1. 10. jaṅgama-kalpa-vṛkṣa iva yō jātah samast-ārthīnām || [10 ||]. Dōḍaṇḍa-dvaya-caṇḍa-vikrama-kaṣā-dig-vāji-ṣaury-ādbhuta-kṛiḍ-ōnmūlita-vairi-vargga-vipinaḥ prauḍha-pratāp (?) -ūruṇaḥ | vāry-ālīṣu yath = āvḍhi (bdhi) r = āpadi tathā pravya-
1. 11. kta-dhairya-kramah kiñ = ca prākṛta-sarvva-gurvva-vipukluḥ sampatsv = analpāsv = api || [11 ||]. Ṣṛiy = ānya-vyāsauḡṣō visadṛṣa-samācāra-vikalō janō madyēu = ēva skhalanam = upa-hāsuḥ = ca bhujatē | iyam sāv yasya ṛiḥ samucita-vi—
1. 12. lās-ābhuyadayini yath-ārthā s lūḡkāraḥ samadhika-jan-ānanda-viṣayaḥ || [12 ||].² Yasy = ākṛttrima-mēdur-ācṛita-māhi-paryanta-samvāsibhir = nṛty-ārumbha-vijṛmbhaṇ-ōddhata-bhu-jair = udgiyamānā janaiḥ | sānand-ōtpulakam vi—
1. 13. -mānam = asakṛd = dēvair = vvilamv (b) -ām v (b) arē c'āghā-ghūrṇ-ṇita-mūrdhabhir = nipatitaiḥ kīrtiḥ samākarmṇyatē || [13 ||].³ Sābhyasūya-paritōṣa-lōṣatō vikṣitāni ṣanakaiḥ sakatākṣaḥ | yasya vidviḍ-anukūla-kulāni prāpnvanti nidha—
1. 14. -nāni dhanāni || [14 ||].⁴ Ninadanti danti-vara-hanti yāni kucitāni tāni ca durunnayāni | ati-manda-mandam = atigah-varāsu nivasanti santi giri-kandarāsu || [15 ||].⁵ Samtatēna tatēna tējasā durnnayasya nayasya vidvi—
1. 15. -ṣām | ākulāni kulāni durggamād = durggatāni gatāni durgga-mam || [16 ||].⁶ Sapt-ānivu (mbu) -rāṇi-visarat c (ac-ch) latha-mēkhalāyā asyā bhuvah kati na bhūni-bhujō = va (ba) bhūvuḥ | siddhim na kasya cid = agād = yad = analpa-kalpais = tōn = ātra kīrttanam = akā—
1. 16. -ri Janārdanasya || [17 ||].⁷ Kailās-ācala-ṛṛṇṇa-sambhramam = adhaḥ-kurvāt = prarūḍh-ōdaya-prālēya-dyuti-kunda-sundara-yaṣaḥ-puñj-ōpamēy-ākṛti | yatr = ōttuṅga-ṣikh-āgra-saṅgata-ṣarac-candr-āṅ(ni)ṣu-ṣubhra-ṛibhir = mnuṇcan = nūtana-maṇja-rir = iva patā—

¹ Metre Čārdūlavikṛīḍita; and of the next three verses.

² Metre Čikharīṇi.

³ Metre Čārdūlavikṛīḍita.

⁴ Metre of first *pāda* Rathoddhatā, the rest Svāgatā.

⁵ Metre Jagatī.

⁶ Metre Akṣaravati.

⁷ Metre Vasantatilakā.

1. 17. -kābhir=nnabhō rājatē || [18||].¹ **Vāji-vaidya-Sahadēva-**
 niruktiḥ tat-praṇastir=iyam=astu nitāntam | prēma-sauhṛda-
 sukh-aika-dharitri sajjanasya hṛdayē ramaṇ-iva || [19||]²
Ṣrīmatō s dhīpa- Sōmasya ātmajēn=ārjitam yaçah | u—
 1. 18. -tkirṇṇa-karmmañi **Ṣrīmat-Saṭṭa-Sōmēna** çilpinā || [20||]³
 Samasta-bhū-maṇḍala-rājya-bhāram=āvi(bi)bhrati **Ṣrī-Naya-**
pāla-dēvē | vilikhyamānē daça-pañca-⁴saṁ(ḥ)khyā-saṁvatsarē
 siddhim = agāc = ca kirttiḥ || [21].⁴ ||

Abstract of Contents.

Om! Salutation to Vāsudēva. May Viṣṇu with his two wives, Lakṣmī and Sarasvatī, bless you (v. 1). The (town) Gaya where Brahmā has come to reside, and which is ornamented with high buildings, is praised as the unbarred door to salvation in this world (v. 2). There the loud reading of Veda-studying Brahmins makes talk hearable only with care; and the constant smoke of sacrificial fires makes it as if a hiding place for *dharma* afraid of the *Kali-kāla* (iron age) (v. 3). In the Mahā-dvija family—ever the home of Lakṣmī on account of their virtues, and stainless as the *kunda* flower engrown by the autumnal moon—(v. 4), like Çiva was born Paṇitōṣa by name (v. 5); whose fame covered the whole world (v. 6). From him was born, like Nārāyaṇa, Çūdraka (v. 7). His fame spread over the three worlds (v. 8). From him was born Viçvāditya in whom the qualities hitherto found separate have combined (v. 9). Verses 10 to 16 sing the praises of Viçvāditya. Many chiefs arose on this earth, but none attained fulfilment so much as he (Viçvāditya) did by erecting a temple (*kīrttana*) of Janārdana (v. 17). V. 18 describes the temple in high-flown language. May this *praṇasti*, the words of the veterinary physician Sahadēva, find its place in the hearts of good men like fair ladies! (v. 19). By the artisan Ṣrīmat Saṭṭa-Sōma, son of Ṣrīmat Adhipa-Sōma, (this) fame in inscribing was obtained (v. 20). While Ṣrī-Nayapāla Dēva was ruling the whole world, this monument written in (his) fifteenth year attained completion (v. 21).

¹ Metre Çārdūlavikrīḍita.

² Metre Svāgātā.

³ Metre Anuṣṭubh.

⁴ Metre Upajāti.

INDEX

TO THE

JOURNAL OF THE ASIATIC SOCIETY OF BENGAL,

VOL. LXIX, PART I.—1900.

- ‘**Abdullāh Khān**, 2.
Açvina, shrine of, 84.
Acyuta Rāya, King of Vidyānagara, 186.
Adhipasoma, artisan, 191, 195.
Agarwa, mound at, 83.
Aḥmad Shāh, Bahmanī King, 182.
Akutā-Abutā, *biruḍa* of Bhānudeva, King of Orissa, 182.
Alberuni, statement by, regarding the use of palm-leaf and birch-bark for writing purposes, 124 ff.
A-li forest, 75.
Amnaur, 80.
Amra, 80.
Ancestor worship of Asur tribe, 149.
Arāḍa Kalāma, 77.
Araraj, 83.
Arrah, 77, 78.
Arrian, *Indica*, quotation from, 133 ff.
Asiwan, 75.
Asui, 84.
Asoha, 85.
Asoka pillars, site of, 83.
Asurs, non-Aryan tribe of Chota Nagpur, language of, 147 ff.
Atharban pargana, 85.
Atiṇā, Buddhist teacher, 191 ff.
Ayodhyā, 75.
- Bahmanī kings** of Kulbarga, 182, 184.
Baitalgarh, 89.
Bāla grove, 81.
Ball, 81.
Ballia, 87.
Bakshālī MS., 126.
Belwa, 79.
Bengal, Palm-leaf MSS. from, 113 ff.
Besarh, 74, 77 ff., 83.
Bhāgyadevi, queen, 69.
Bhānudeva, King of Orissa, 182.
Bharuhia, 89.
Bheriagarh, 89.
Bhikaband, 79.
Bhīmadeva, *sāndhivigrahika*, 68, 73.
Bhitaura, 84.
- Bhoi dynasty of Orissa kings, 185, 187 ff.
Bhramaravara, *biruḍa* of Kapilendra Deva of Orissa, 174, 175, 178, 180.
Bihar, Palm-leaf MSS. from, 115 ff.
Bijaigarh, 89.
Bijapur, 89.
Birch-bark, use of, as writing material, 93 ff.
 ———— MSS. from Northern and Central India, 125 ff.
Bloch, T., article by, on a new copper-plate inscription of Jayādityadeva II., 88 ff.
Bon festivals in Ladakh, 137.
Borassus flabellifer, 93 ff.
 ———— earliest reference to, 134.
 ———— fruit of, 132 ff.
Bower MS., 127, 128.
Brāhmī script, origin of, 130 ff.
Bu-ston, Tibetan work by, called *chos hbyung*, 191 ff.
- Caitanya**, visit of, to Puri, 186 ff.
Caitanya-carit-amṛta, quotation from, 184, 186.
Caitanya-maggala, reference to, 186.
Cakā Pratāpa Deva, King of Orissa, 188.
Campāhiṭṭi, town, 68, 72.
Cān-Cūb, Tibetan King, 192.
Candrādevī, queen, 90, 91.
Caṅkaradevagarman, *brāhmaṇa*, 62, 64.
Caṅkusaṇḍā, village, 76, 90, 91.
Cāpāla Caitya, 79.
Caṇnakasvāmin, *brāhmaṇa*, 68, 72.
CHAKRAVARTI, M. M., article by, on an inscription of the time of Kapilendra Deva of Orissa from Gopināthapura, 173 ff.
 ————, article by, on the last Hindu kings of Orissa, 180 ff.
 ————, article by, on an inscription of the time of Nayapāla Deva, from the Kṛṣṇadvārikā temple at Gaya, 190 ff.
Chen-Chu, kingdom of, 86 ff.
Cherand, 74, 76, 80.

